Drug Markets

January 1930

THE JOHNS HOPKINS LIBRARY
JAN 2 8 1930

The Magazine of the Manufacturing Drug Trade

Hy-Speed Hy-Speed Hy-Speed Hy-Speed Hy-Speed Hy-Speed Hy-Speed

ALSOP EQUIPMENT

A 50 gal. "ALSOP" tank with a one-quarter H. P. "Hy-Speed" Portable Mixer

Portable Electric Mixers

TEN MEN Could not mix a sixty gallon tank of syrup or other liquid compounds, as quickly, as thoroughly or as uniformly as one of our small size one-quarter H. P. "*Hy-Speed*" Portable Electric Mixers, which operates from light-circuit .... clamps to any tank in one minute .... is very low in price and costs only a few cents per hour to run. Manufactured in twenty other models to fit *all* size tanks.

"Hy-Speed Internal Pressure Filters

Electric Pressure Filters

100 FUNNELS of 3 gallons capacity each, with filter paper, could not filter in *one day*, many products which our small size "*Hy-Speed*" Electric Filter handles without labor in *one hour*. This does not apply to all products, but in nearly every case, filtering costs will be cut 95 percent. Operates from light socket .... portable .... easily cleaned .... low in price. Let us tell you all about this remarkable machine.

"Hy-Speed" Electric Bottle-Filler

Vacuum Bottle Fillers

LEAKY BOTTLES have ruined many a shipment and lost many a customer. Hand or gravity methods of filling cannot defeat small pin holes or cracks in bottles. However, when the "*Hy-Speed*" Vacuum bottle filler is used, a bottle that will leak even *air* remains unfilled, and can be rejected. This small compact machine, now being used by hundreds of firms, fills every perfect bottle evenly. The filling handle can be adjusted for different size bottles easily. No valves ... can be cleaned quickly ... operates from light socket ... is low in price ... and weighs only 45 pounds including motor.

Air Tight Settling Tanks with two faucets and liquid level gauge

Glass-Lined Tanks

CONTAMINATION and corrosion are practically eliminated forever when "*ALSOP*" glass-lined mixing or storage tanks are used. Metallic contact affects *all* liquid products, glass lined tanks are best for storage or mixing any liquid that goes into *glass bottles*. Alsop tanks are not only glass lined, but are glass coated on the outside also, thus eliminating paint, and presenting an attractive finish that is easily cleaned and always look like new. Thousands in use. All sizes and shapes up to 200 gal. capacity.

WRITE FOR CATALOGUE

ALSOP ENGINEERING CO.

47 West 63rd Street New York City

Hy-Speed Hy-Speed Hy-Speed Hy-Speed Hy-Speed Hy-Speed Hy-Speed

EPSOM SALT··

U. S. P. Recrystallized

DOW Epsom Salt U.S.P. is unmatched in quality, uniformity and appearance. In addition to being remarkably free from chemical and mechanical impurities, it is delivered in the form of beautiful needle-shaped crystals free from fine material. The Dow process of recrystallizing in a vacuum permits accurate control of the form and appearance of the finished product.

The fact that the crystals do not dehydrate rapidly, which permits slight exposure to air without detrimental effects, proves an important factor to pharmaceutical manufacturers engaged in repackaging.

The extreme care exercised in all Dow manufacturing processes extends right through to the shipping department. Dow Epsom Salt U. S. P. is carefully packed in selected, tightly sealed, paper lined barrels containing 350 lbs. net, kegs containing 125 lbs. net, and heavy paper lined, waterproof bags containing 100 lbs. net.

We will be glad to quote on your requirements in any quantity.

A PARTIAL LIST OF DOW PHARMACEUTICAL CHEMICALS

Acetphenetidin, U. S. P.
Bromine, Purified
Minor Bromides
Chloroform, U. S. P.
Cinchophen, U. S. P.
Ferric Chloride, U. S. P., Solution or Crystals
Phenol, U. S. P.
Acetyl Salicylic Acid, U. S. P. Powder or Crystals
Acetyl Salicylic Acid, Granulation, 10% Starch
Methyl Salicylate, U. S. P. (Synthetic Wintergreen)
Sodium Salicylate, U. S. P.
Salicylic Acid, U. S. P.
Minor Salicylates

THE DOW CHEMICAL COMPANY -:- MIDLAND, MICHIGAN

LGG1.051 D84
562884

Drug Markets

January 1930

Established 1914

The Magazine of the Manufacturing Drug Trade

Editorials 17
Moving Ahead—The Discount Problem—New Prohibition Dangers—A Blessing in Disguise—McKesson & Robbins Cited

Feature Articles

Even Viosterol Finds Sales Plans a Bar to Stable Prices 21

Manufacturing Turnover Should be 9 25
By Francis Chilson

That Mutual Scheme 27
By Robert R. Ellis

Preserving Pills 29
By H. Eschembrenner

Less Physicians Will Dispense 33
By S. DeWitt Clough

Harrison Narcotic Law 35
By L. G. Nutt

The McKesson Citation 39

Sealing Oils 41

Toilet Preparations

Lemon-Scented Vervain 49

Habillons Nos Perfumes—Let Us Dress Up Our Perfumes 53
By L. Risacher

Synthetic Aromatics—Citral, Citronellal, Hydroxycitronellal 57

Market Facts from Grasse 61
By O. C. Zilisch

Ten Years Ago 19

Industry's Finances 45

Raw Material Market
Fine Chemicals 75
Perfume and Flavoring Materials 86
Crude Drugs 92

Drug Market Place 102

Buyer's Guide 4

Index to Advertisers 104

Copyright 1930 by Drug Markets, Inc.

Coming Issues

Larger Chains are surely developing a method of merchandising that does not involve sharp price cutting on drug trade leaders. Their windows and low prices are now being devoted to attractive novelties that are not products of the drug manufacturers. Will the independent retailer be able to meet this new form of competition and what does it mean to the drug manufacturer? This article will shortly appear.

VOL. XXVI **DRUG MARKETS, INC.** NUMBER 1

PUBLISHERS

Publication Office, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 25 Spruce St., N. Y. City

Editor THOMAS R. FARRELL | President WILLIAMS HAYNES | Business Manager FRAZER V. SINCLAIR

PUBLISHED MONTHLY AT PITTSFIELD, MASS., SUBSCRIPTION PRICE, TWO DOLLARS A YEAR, IN ADVANCE, POSTAGE PAID TO ALL COUNTRIES; THREE WEEKS' NOTICE IS REQUIRED TO CHANGE SUBSCRIBER'S ADDRESSES, AND WHEN NOTIFYING KINDLY GIVE BOTH OLD AND NEW ADDRESSES. PRINTED BY THE SUN PRINTING COMPANY, PITTSFIELD, MASS. ENTERED AS SECOND CLASS MATTER, JANUARY 1, 1928 AT THE POST OFFICE, AT PITTSFIELD, MASS., UNDER THE ACT OF MARCH 3, 1879.

ANY SIZE
ANY THREAD
ANY COLOR ▶▶▶▶▶

Spring Stopper seals it with DUREZ

THE LIMITATIONS of the average closure are well known to the man who spends his time making them. You could recite them backward. There is difficulty in accurate threading. The cap binds on resealing. Destructive agents may affect the inside of the seal. Colors are restricted. And production machinery is usually expensive! . . . Can anything be done about it? The Spring Stopper Company, of New York, uses Durez.

This long-established concern finds Durez economical, efficient, and beautiful for every type closure. *There is one operation;* all threads are *molded* exactly alike, in any quantity, whether inside or outside, fine or bayonet. Cutting or adjustments are unnecessary. Close limits are assured. And because Durez is absolutely uniform, each closure fits tightly and seals securely, making it a leak-proof seal.

Durez has other advantages. It eliminates costly polishing and burnishing. It provides every practical color, and enables you to blend, striate, or mottle those colors. Acids, moisture, gases, heat, or water will not affect Durez. It is tough, hard and strong. The finish is permanent. And Durez is economical!

What sort of closures are you using? Are they satisfactory? Do they help you sell your product? Let us tell you more about this perfect molding compound! General Plastics, Inc., 11 E. Walck Road, N. Tonawanda, N.Y. Also New York, Chicago, San Francisco, Los Angeles.

Send for this interesting booklet

Our booklet, "Do It With Durez," tells the complete story of this wonderful plastic. It shows how Durez is economically adapted to meet the most exacting needs. Profusely illustrated in full colors. Write for a copy today.

Buyers' Guide

RAW MATERIALS

ALCOHOL
American Commercial Alcohol Corp.
The Rossville Com. Alcohol Corp.
U. S. Industrial Alcohol Co.

AROMATIC CHEMICALS
Dodge & Olcott Company
P. R. Dreyer Inc.
Euro American Corporation
Benj. French, Inc.
Fritzsche Brothers, Inc.
Givaudan Delawanna, Inc.
Magnus, Mabee & Reynard
Newport Chemical Works, Inc.
Pfaltz & Bauer, Inc.
Schering Corporation
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

BEESWAX
Theodor Leonhard Wax Co., Inc.
Will & Baumer Candle Co., Inc.

BIOLOGICAL CHEMICALS
Wilson Laboratories

BORAX
American Potash & Chemical Corp.
Pacific Coast Borax Co.

CHALK, PRECIPITATED
H. J. Baker & Bro.
Industrial Chemical Sales Co., Inc.
John & E. Sturge, Ltd.

COD LIVER OIL
H. J. Baker & Bro.
P. R. Dreyer Inc.
E. M. Javitz & Son
Norwegian Cod Liver Oil Association

COAL-TAR PRODUCTS
Baird & McGuire, Inc.

CRUDE DRUGS
J. L. Hopkins & Co.
McIlvaine Brothers, Inc.
S. B. Penick & Company

DISINFECTANTS
Baird & McGuire, Inc.

ESSENTIAL OILS
California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer Inc.
Euro American Corporation
Benj. French, Inc.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard
Newport Chemical Works, Inc.
Pfaltz & Bauer, Inc.
Plaimar, Ltd.
A. M. Todd Co.
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

FLAVORING MATERIALS
California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer Inc.
Euro American Corporation
Fritzsche Brothers, Inc.
Magnus, Mabee & Reynard
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

GELATINES
Coignet Gelatines

GLYCERIN
H. J. Baker & Bro.
Will & Baumer Candle Co., Inc.

LANOLIN
E. M. Javitz & Son Inc.
Pfaltz & Bauer, Inc.

MEDICINAL CHEMICALS
Abbott Laboratories
J. T. Baker Chemical Co.
Chas. Cooper & Co.
Dow Chemical Co.
R. W. Greeff & Co.
Heyden Chemical Corp.
Hoffman-LaRoche Chemical Works, Inc.
Mallinckrodt Chemical Works
Merck & Co., Inc.
Monsanto Chemical Works
Newport Chemical Works, Inc.
N. Y. Quinine & Chemical Works, Inc.
Chas. Pfizer & Co., Inc.
Schering Corporation
Wilckes-Martin-Wilckes Co.

MINERAL OIL
M. W. Parsons Imports
Schliemann Companies, Inc.

SHAVING CREAM BASE
John Powell & Co., Inc.

VANILLIN
Euro American Corporation
Givaudan Delawanna Inc.
Monsanto Chemical Works

CONTAINERS

BOTTLES
Carr-Lowrey Glass Co.
Maryland Glass Corp.
Owens-Illinois Glass Co.

BOXES (Corrugated)
Container Corp. of America
Hinde & Dauch Paper Co.

CANS
American Can Co.

COLLAPSIBLE TUBES
Aluminum Co. of America
Bond Mfg. Corporation
New England Collapsible Tube Co.
Sun Tube Corp.
White Metal Mfg. Co.
A. H. Wirz, Inc.

PACKING MATERIAL
Kimberly-Clark Corp.

CLOSURES

CORKS
Armstrong Cork Co.

INSIDE THREAD CAPS
Spring Stopper Co.

METAL CAPS
Aluminum Co. of America
Anchor Cap & Closure Corp.
Crown Cork & Seal Co.
Ferd. Gutmann & Co.
Phoenix Hermetic Co.

PLASTIC CAPS
General Plastics, Inc.

MACHINERY & EQUIPMENT

FILLING MACHINES
Alsop Engineering Co.
Arthur Colton Co.
Horix Manufacturing Co.
The Karl Kiefer Machine Co.
F. J. Stokes Machine Co.

MIXING EQUIPMENT
Alsop Engineering Co.
Arthur Colton Co.
Mixing Equipment Co.
F. J. Stokes Machine Co.

PACKING & CARTONING
American Machine & Foundry Co.
Package Machinery Co.

LABELLING EQUIPMENT
Economic Machinery Co.

PHARMACEUTICAL MACHINERY
Arthur Colton Co.
F. J. Stokes Machine Co.

Highest test liners add toughness and resistance to our Corrugated Boxes in a very definite degree for MORE STRENGTH

The high, strong resilient Corrugated safety arch insures 30% to 70% MORE PROTECTION *and* ECONOMY

Our cushion corrugations run 36 to the foot with 3/16 of an inch between the heavy liners, giving a board caliper of practically 1/4 inch over all—an unusually strong board.

Better Boxes Pay Dividends in Reduced Shipping Costs

IT is a well known fact that cheap fibreboard shipping boxes are more expensive in the long run than quality boxes built primarily for hard service. Slap-dash boxes, sold at an attractive low price, are sources of trouble and this fact shippers of **Drugs** or affiliated products know to be generally true. Shippers who buy quality boxes from reputable makers always experience less trouble than those who consistently buy at "rock-bottom prices" and it is logical that the best wares, whatever the merchandise may be—are never the cheapest in construction or price, and the wear is in proportion to the quality.

Reduce your shipping costs by using better shipping boxes.

In our processing of **corrugated** and **solid fibre shipping containers** we aim at quality—always at quality. Shippers, by using quality boxes, benefit by making definite savings and where we have access to their plants we often find we can make still greater savings by suggestions offered from our great store of experience.

We will be glad to figure with you on your requirements and help solve your packing and shipping problems, and don't forget—we furnish quality boxes only and prescribe from our great variety of regular and special types as required to fill your needs. If you write, refer to Department 7 for quick service.

CONTAINER CORPORATION
OF AMERICA
AND
MID-WEST BOX COMPANY

111 W. Washington St. CHICAGO, ILLINOIS

Six Mills—Twelve Factories Capacity 1200 tons per day

"See

American First"

Odorless, Colorless "EVERCLEAR" Alcohol

Test for yourself the purity of "Everclear" Alcohol. Hold it to the light, and note its crystal clearness. Uncork the container, and verify our statement that it is absolutely odorless.

These are conclusive facts as to "Everclear" purity. This fine quality is the result of manufacture in our plant in the heart of the grain fields. . . of an exclusive distillation process originated in our laboratories.

Only the highest degree of purity in Alcohol will serve the important needs of drug manufacture. In "Everclear" Alcohol these high standards are fully met.

STREAMS of "Devil's Tar" often put the salt well drillers of seventy-five years ago to great expense. Then a man of larger vision, Colonel E. L. Drake, perceived the possibilities of this fluid and, in 1858, formed the first company to drill for petroleum. He "struck oil" on the banks of Duck Creek, Washington County, Ohio, where a monument now marks the spot. Drake's success was the beginning of an era of oil speculation and competitive drilling that has made possible the automobile, the air engine, the motorship, and the thousand and one applications of the by-products of petroleum.

SALES OFFICES AND WAREHOUSES
Baltimore, Md.
Birmingham, Ala.
Boston, Mass.
Buffalo, N. Y.
Chicago, Ill.
Cincinnati, Ohio
Cleveland, Ohio
Detroit, Mich.
Grand Rapids, Mich.
Gretna, La.
Indianapolis, Ind.
Kansas City, Mo.
Memphis, Tenn.
Minneapolis, Minn.
Nashville, Tenn.
New York, N. Y.
Omaha, Nebr.
Pekin, Ill.
Philadelphia, Pa.
Pittsburgh, Pa.
St. Louis, Mo.
St. Paul, Minn.
San Francisco, Cal.
Toledo, Ohio
Wichita, Kans.

EVERCLEAR ALCOHOL
REG. U.S. PAT. OFF.

This is number 11 of a series depicting historical periods in the development of America

"SEE AMERICAN FIRST"

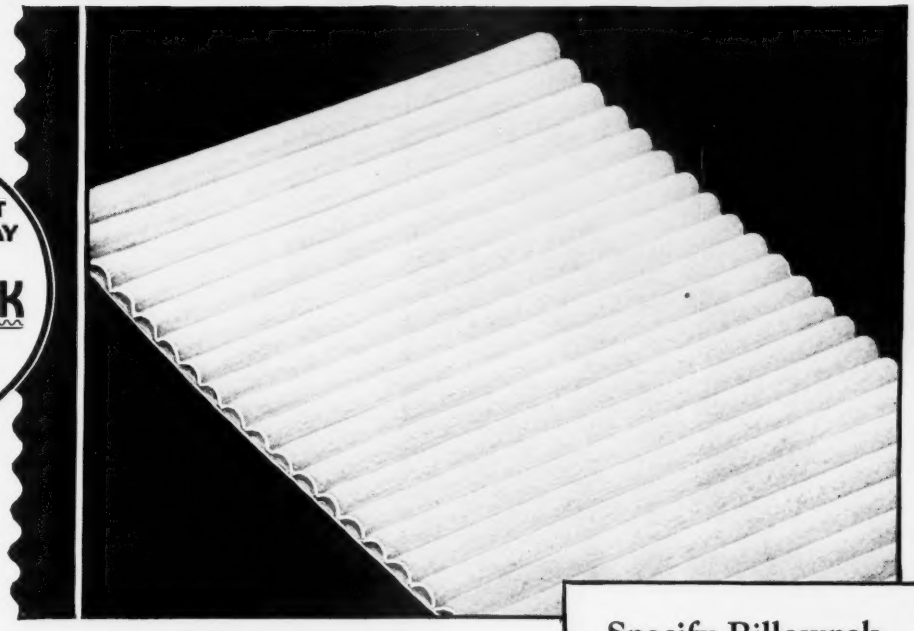
COMMERCIAL ALCOHOL CORPORATION

420 Lexington Avenue, New York, N. Y.

Plants:

Pekin, Ill. Gretna, La. Philadelphia, Pa. Sausalito, Cal.

Announcing Billowpak



PACKAGE YOUR PRODUCT THE MODERN WAY
SPECIFY
BILLOW PAK
REG. U.S. PAT. OFF. AND FOREIGN COUNTRIES
CREPE WADDING

A New Refinement—*plus* New Efficiency for your Package Interior

LUXURY with strength; softness of velvet—white, beautiful—that's BILLOWPAK, the new Kimberly-Clark product for packing and packaging.

Air-cushioned—because those sturdy arches of softest cellulose fibre construction confine AIR, the best of all cushions.

BILLOWPAK folds any direction without cracking. It is super-absorbent of moisture. It provides excellent insulation against heat or cold—is dustless. A marvelous, new product that you'll want to consider for *your* product's package design. It is low in cost, easy for your packers to handle—packing labor is an important cost item. Will eliminate damage to your product from the time it leaves your factory until delivered to the user.

Specify Billowpak in designing packages for

Atomizers	Jewelry
Auto accessories	Lamps
Airplane parts	Leather goods
Beads	Lenses
Bric-a-brac	Mirrors
Candles	Optical goods
China	Patent medicines
Cigar lighters	Perfumes
Clocks	Pewter
Compacts	Phonograph records
Cosmetics	Picture frames
Desk sets	Radio tubes
Door hardware	Scientific products
Drugs	Silverware
Electric appliances	Soap
Food products	Toilet articles
Glassware	Vanity cases
Ink	Watches

Free samples furnished without obligation. Use coupon or your letterhead. Ask our help if desired.

BILLOW PAK
REG. U.S. PAT. OFF. AND FOREIGN COUNTRIES
CREPE WADDING

KIMBERLY-CLARK CORPORATION, Neenah, Wis.
Address home office or sales office at 208 S. La Salle St., Chicago, Ill. 122 East 42nd St., New York City
Please send me sample of Billowpak Crepe Wadding
Name.....
Address.....
Attention.....
Our Product is.....
DM-1

During 1930, 19,250,000 advertisements in The Saturday Evening Post and The Ladies' Home Journal will increase the already great demand for products packed in glass under Anchor Amerseal Caps. Look for our advertisement in The Saturday Evening Post of January 11th.

FINE TOILETRIES
keep their quality . . when sealed by the ANCHOR AMERSEAL CAP

Hundreds of the most advanced manufacturers of fine toiletries—a few of whose names and brands appear above—are using Anchor Amerseal Caps for toiletries that are used often, a little at a time. For practical experience and long laboratory research have proved that creams and lotions so protected will not deteriorate, harden or evaporate. And Anchor Amerseal Caps are pleasantly easy to use—no threads to freeze or cement to the container . . . . Also Anchor Amerseal Caps are speedily and economically applied in the factory by hand or machine, three or four times as fast as other types of closures. Lithographed with your own design and colors they will improve your package—make it more attractive to the consumer and thus help to increase your sales. Other advantages and economies of these modern closures will be interesting to you. We will gladly and promptly send you full information if you will fill in and mail the coupon.

A quarter turn to the right applies the Anchor Amerseal. Lugs, formed to fit the contour of the glass threads, draw the cap down and effect a tight uniform contact around the complete top edge of the container finish.

MANUFACTURERS: To secure full information about Anchor Amerseal Caps fill in and mail coupon!

Send detailed advantages of using Anchor Amerseal Caps on our packages.

Name_____

Address_____

_____

*We manufacture*_____

and put out about _____ packages per *year. Under separate cover we are sending* empty samples of our packages.

Anchor Cap & Closure Corporation
LONG ISLAND CITY, NEW YORK • TORONTO, CANADA

Tailor-Made For Your Product

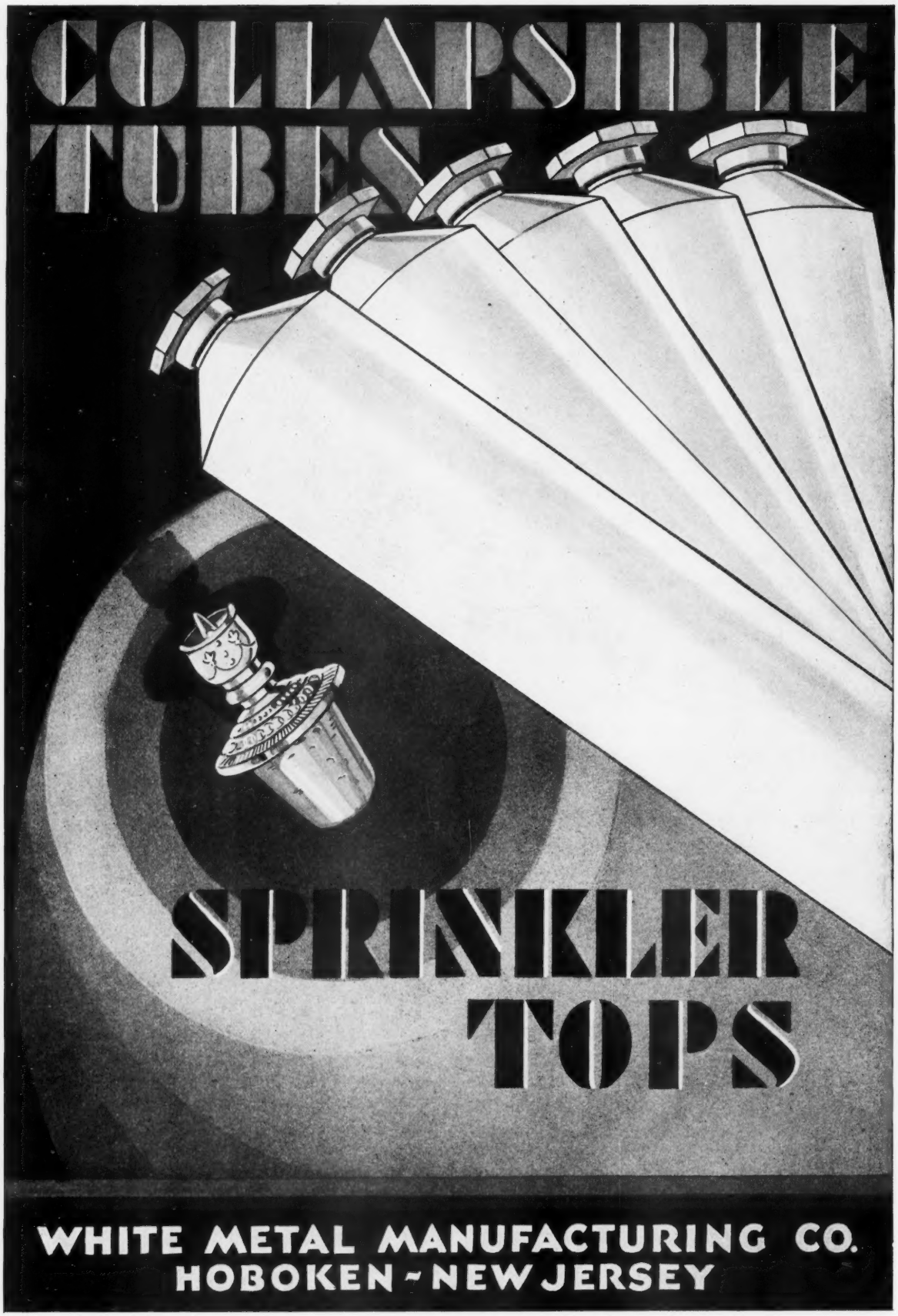
THE container, the label, and the closure all contribute to the appearance of the bottled package. Each plays its part in forming the visual impression the product makes on the prospective consumer. To make this impression exactly what you desire demands the careful "tailoring" of every element to your individual requirements.

With Armstrong's Embossed Top Corks you express the quality appeal better than any other closure. Strictly "tailor-made" they are specially designed and colored for each package. Their use imparts an individuality of appearance such as no other closure can give. In addition, Armstrong's Embossed Top Corks make a tight seal and are easy to remove and replace.

In quantities of 10,000 Armstrong's Embossed Top Corks cost but little more than ordinary closures. Samples and prices will be cheerfully submitted on request. Armstrong Cork Company, 913 Arch Street, Lancaster, Pennsylvania.

Armstrong's Embossed Top Corks

Handy as a Door Knob


COLLAPSIBLE
TUBES
SPRINKLER
TOPS
WHITE METAL MANUFACTURING CO.
HOBOKEN ~ NEW JERSEY

SCIENTIFIC ACCURACY
A safeguard of satisfaction

THE famous research laboratories that this company maintains are known the world over for the work they have accomplished in aiding industry to overcome bottling and sealing troubles. They represent one of the most complete and extensive individual undertakings in the field of industrial research—they have given constructive assistance representing savings of millions of dollars in the bottling and sealing of a vast line of products ranging from soft drinks to chemicals.

CROWN SCREW CAPS

The perfecting of special liners to meet the particular condition of every product is a feature of the work of these laboratories which has made the Crown Screw Cap the most satisfactory, safe and efficient that the Drug Manufacturer can use. The facilities of these laboratories are available to you at any time they can be of help in your operation. Call upon them for technical assistance. Write today for complete information regarding this better seal—*gauge tested for accuracy*—and a sales builder through its convenience and advertising features. Handsomely designed and beautifully lithographed, Crown Screw Caps are an asset on many of the country's largest glass packaged products.

Write today for samples and complete descriptive data.

Crown Cork & Seal Co.
Baltimore · Maryland
Makers of the Crown
(THE FAMOUS CLOSURE FOR WIDE MOUTH GLASS)

THE PHOENIX FLAME
PHOENIX FLAME
PHOENIX FLAME

WHY NOT "AUDIT"

YOUR PACKAGING SYSTEM?

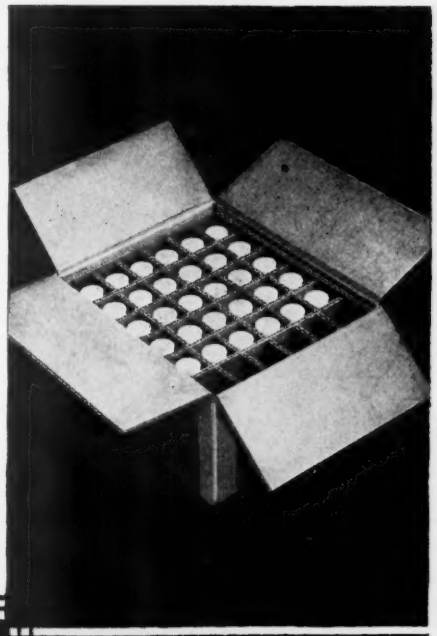
IT is just as necessary to check up on your packaging system as it is to audit your books.

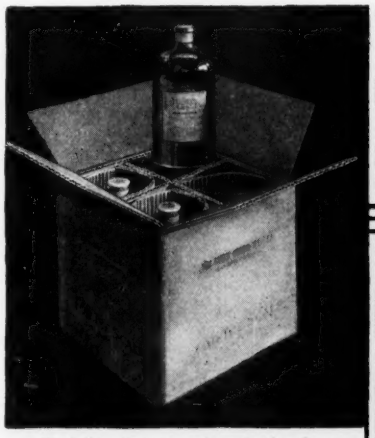
With constantly changing conditions in present day shipping methods it is important to know that your package provides complete protection, convenience and efficiency all the way from packing room to point of delivery without unnecessary cost or expense.

To secure the utmost efficiency and economy may require only a slight change in your present packaging method. Or it may necessitate the complete redesigning of your whole packaging system.

In either case, it will pay you to send for an H & D Package Engineer. Shippers save thousands of dollars every year through the sound counsel and recommendations of the staff of 50 H & D Package Engineers.

THE HINDE & DAUCH
PAPER COMPANY
213 DECATUR STREET
SANDUSKY, OHIO





Bottled products are safe against breakage in H & D Engineered Packages.

Toilet preparations are adequately protected in H & D Packages.

Above: A double lined H & D container for shipping shampoo.

A double walled H & D shipping box to protect disinfectants

SEND FOR THE PACKAGE ENGINEER

Why not take advantage of H & D service for a check-up during the quiet season? There's no charge or obligation.

A copy of the latest H & D booklet on scientific packaging in your industry is yours for the asking. Mail the coupon below.

HINDE & DAUCH *corrugated fibre* SHIPPING BOXES

H&D

THE HINDE & DAUCH PAPER COMPANY
213 Decatur Street, Sandusky, Ohio

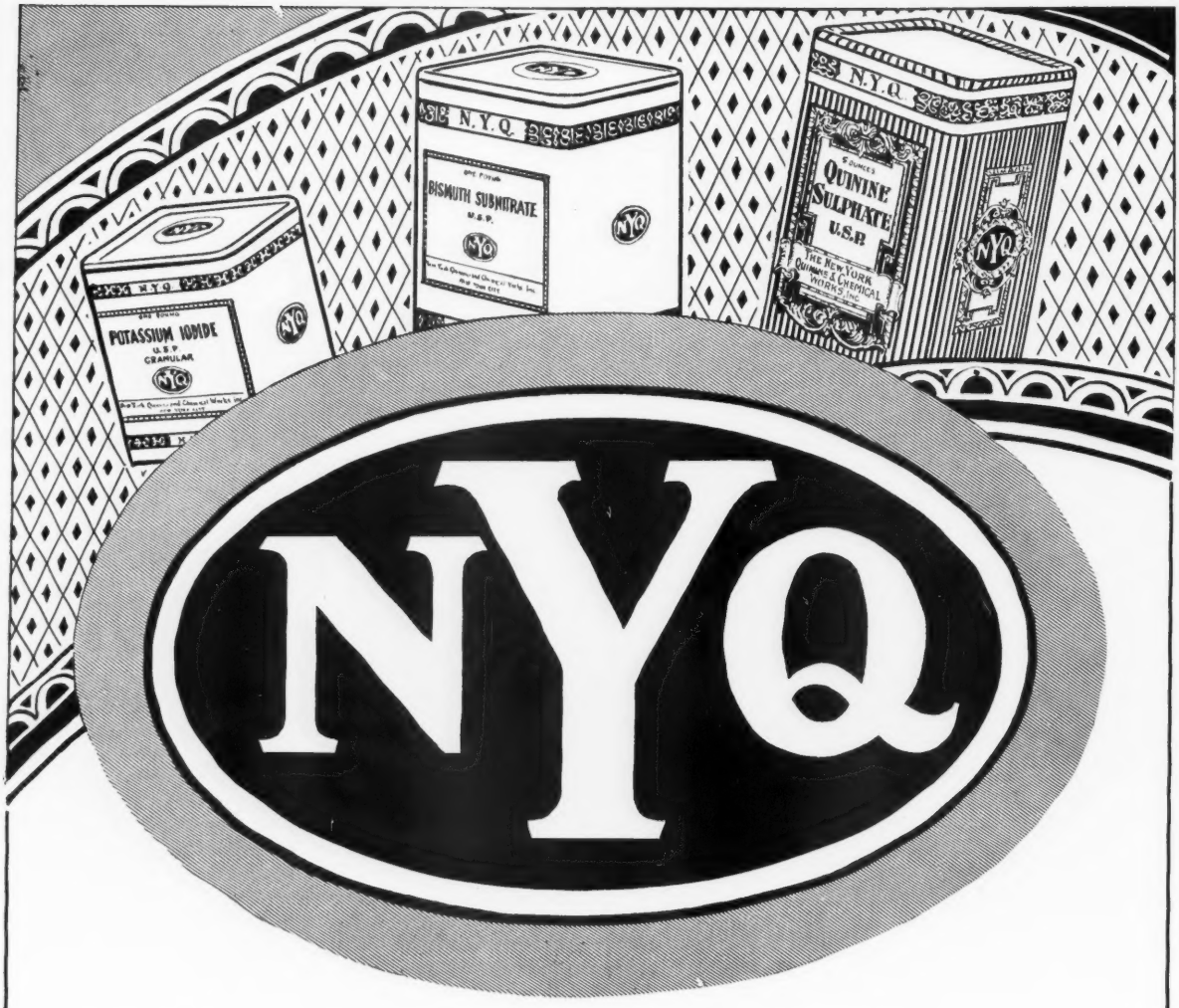
Please send me a copy of "Engineered Packages in Drug, Chemical, Cosmetic and Proprietary Industries."

Name .....

Address .....

City ..... State .....

We are interested in packing .....



Acetanilid
Bismuth Subnitrate
Bismuth Subcarbonate
Cinchonine
Cinchona Alkaloids
Cinchophen
Codeine Sulphate
Codeine Phosphate
Cinchonidine
Morphine Sulphate
Ethyl Morphine
Iodoform
Glycerophosphates
Opium
Potassium Iodide
Quinine Sulphate
Quinidine
Thymol
Salicylates
Strychnine
Bromide of Soda
Bromide of Potash
Bromide of Ammonia
Silver Salts
Menthol-Y (trade mark reg.)
Vanillin

In bulk for manufacturers and in packages for wholesale trade

The New York Quinine & Chemical Works

INCORPORATED

General Offices: 99-117 North Eleventh Street
New York Borough of Brooklyn
St. Louis Depot, 304 South 4th Street, St. Louis, Mo.

Are the Tubes Worthy of Your Product?

Does their appearance bespeak the "quality idea" your advertising strives so hard to convey?

Is the decorating clean-cut, sharp and in perfect register, calculated to build sales and create prestige?

Have they that durability which permits the consumer to use *all* the contents without waste?

Have the "minor details" such as perfect threading of cap, and tube been given careful attention?

In other words, are they the kind of tubes you'd make if you were making the tubes for your product?

If there is the least doubt in your mind about the tubes you are now using—if you are interested in collapsible tube quality—we'll be glad to supply samples and prices. ***Just address our nearest office:***

Two Big Plants to Provide Better Service

Our New London plant provides prompt service to the East while our Chicago plant makes unusual service possible in the Central and Western areas.

New England Collapsible Tube Co.

Dept. B-B1, 17-35 Waller St., New London, Conn.
Dept. B-B1, 3132-4 S. Canal St., Chicago
New York Office: Dept. B-B1, 52 Vanderbilt Ave.

NEW ENGLAND COLLAPSIBLE TUBES

Over 1500 Chemicals to Serve You

MORE than 60 years ago when the Mallinckrodt Laboratories were first organized, less than 50 chemicals were manufactured. A new firm without previous experience but with the Spirit of Service dominating every thought and action. The answers to the many questions that constantly arose were determined solely by the dictates of this spirit. An auspicious beginning for any firm to be guided only by the satisfaction of its customers.

The trade was quick to recognize the excellence of Mallinckrodt chemicals and the integrity of their makers. A reputation was built that has endured and grown brighter through these many years. To-day the Mallinckrodt Laboratories are one of the largest manufacturers of fine chemicals in the United States—a distinction that we share with the many friends who helped to make it so.

While our products and customers have increased many fold, that personal touch which guided the Spirit of Service is never lacking and we invite you to call upon us at any time. We will not disappoint you.

Mallinckrodt

Chemicals

Standard for over Half a Century

MALLINCKRODT CHEMICAL WORKS

SAINT LOUIS · MONTREAL · PHILADELPHIA · NEW YORK

Drug Markets

Vol. XXVI JANUARY 1930 No. 1

Moving Ahead

WHILE it is unpleasant to think of it, it is, nevertheless, true that the various groups into which drug manufacturing naturally divides itself have varying aims and purposes that result in quite different ideas on questions involving government regulation of these same manufacturers. For after the Drug Trade Conference of a year ago condemned by resolution the practice of multiple seizures of drug products by the Department of Agriculture, similar action failed this year, and the American Pharmaceutical Manufacturers' Association has gone on record as in favor of the practice which the association says has been properly exercised.

FURTHERMORE, this association—composed mainly of manufacturers who sell dispensing physicians—has also gone on record in favor of regulation of collateral advertising of drug products by the Department of Agriculture rather than by the Federal Trade Commission. The association feels that such regulation is necessary. The establishment of a contact committee of the association to meet with officials of the Department of Agriculture has been approved by the association after the representatives of the association had refused to vote in favor of the establishment of a contact committee of the whole trade to be formed by the National Drug Trade Conference. The American Drug Manufacturers' Association, which also opposed the general contact committee, has been invited to join with the A. P. M. A. in its contact work on labelling.

THE other associations of the trade composed of the wholesale druggists and proprietary manufacturers will probably continue to take different views of these problems. But due to the very nature of the products manufactured by the various groups within the trade there is little that can be done to bring about a unanimity of thought on these questions that react to the advantage of some groups at the same time as they react to the disadvantage of the remaining groups.

DOUBTLESS it is better for the development of the drug trade that no single thought rules and that the different opinions can be placed in action by the various groups. There will always be those who through selfish motives will attempt to retard constructive progress in the trade, just as there will always be those who will likewise through selfish motives attempt to move the trade ahead. The only thing for the farsighted manufacturer to do is to join with those who would move the trade ahead, and, if necessary, readjust his methods of doing business so as to take advantage of the progress of the trade.

The Discount Problem

Ability to purchase in greater volume than a competitor is something that generally results in lower prices from the sellers. Yet in the sale of manufacturers' goods to retailers the recognition of buying power to the extent of greater discounts creates a condition that is generally decried by that part of the retail trade that terms itself "independent." As an evidence of what these independent retailers want, we have the present uneconomic scale of discounts—10 per cent. off on everything down to one-twelfth of a dozen—first inaugurated by the retailers' own mutuals, and later adopted by other wholesalers.

Manufacturers cannot look with favor upon this unsound scheme favored by at least a very large part of the independent retail trade. If manufacturers are paying sufficient money in the form of discounts to allow the wholesalers to operate at a profit, then it is not to the manufacturers' interests to have these discounts given away to the extent that the wholesale business yields little or no profit. The large wholesale houses who have sponsored this sort of thing naturally look elsewhere than to the wholesale business for their profits, and the direction in which they look is undoubtedly the manufacturing business.

The wholesale function should be made to pay for itself, and certainly retailers should not be encouraged to order in such small lots that many shipments spell losses. But neither is it to the best interests of the independent retailers to have increased discounts for case lots when the large majority of them are out of the case lot class. Such a condition would only resolve itself into giving to some of the larger independent retailers a competitive advantage over the independent retailer of average size.

How to grant discounts to the retailers that will—as far as is possible—place the independents on the same buying status as the chains but that at the same time will force them to buy in sufficient quantities to justify the discounts they must receive, is the problem that is facing the wholesale drug trade to-day. It seems that some arbitrary quantity — such as unbroken dozens—must be taken as the standard quantity upon which discounts will be the maximum. The discounts on these lots can be set in accordance with the actual cost of handling the specific items. Anything above this quantity, such as a case lot, must carry no greater discount than the dozen lot. Broken dozens will have to be paid for at the higher cost.

New Prohibition Dangers

The new controversy over prohibition enforcement has reached a point of real danger to the many enormous consumers of alcohol in the drug trade. With the view now taken by the critics in Washington that diversion into illegitimate channels of alcohol intended for industrial consumption constitutes one of the main leaks that must be checked, a new permit system is being devised by representatives of the dry forces. Prohibition Commissioner Doran has come in for much caustic criticism, and in reply has made a statement in favor of the transfer of the duties of enforcement from the Treasury Department to the Department of Justice.

It will be remembered that practically all the associations of drug manufacturers, wholesalers and retailers passed resolutions at their annual meetings held during the past year condemning the proposal to transfer administration of the prohibition law to the Department of Justice. The main reason for this has been the fact that the Department of Justice is accustomed to treating with the detection of criminals and would not look upon the permissive features of the law as a right of consuming manufacturers, but rather as a privilege that could be denied at any time without explanation. Another reason for this almost unanimous action of the trade is the fact that Dr. Doran is well acquainted with the problems that confront legitimate consumers of alcohol in industry and science and that his replacement might readily cause these consumers untold difficulties.

Any manufacturer who had contact with Dr. Doran will testify to his real effort to check the flow of alcohol into illegitimate channels. Dr. Doran cannot be described as a man kind to alcohol consumers, but certainly as a man who is just in his treatment of these consumers. It is, most likely, the fact that the Commissioner is just to which the radical dry forces object. In their eyes alcohol diversion must be stopped no matter what means are taken to stop it. A slow, persistent, method such as is being followed by the present Commissioner does not satisfy these fanatics, they want much faster and more blatant action.

The drug trade and other trades in which alcohol is legitimately consumed must jump into action to prevent this new attack on their rights. It is not within the spirit of the prohibition law that these manufacturers should be in any way embarrassed in securing alcohol for irreplaceable purposes.

A Blessing in Disguise

How the term "hand-to-mouth buying" has been blamed since the war for many of the trade conditions that arose. How manufacturers of all kinds looked for a return to buying ahead in large quantities from year to year with the prediction that "this hand-to-mouth condition cannot last forever." How the thought that the retailer was causing the wholesaler to carry the retailer's stocks, and the wholesaler was forcing the manufacturer to carry the wholesaler's stocks was decried as absolutely uneconomic since the two types of distributors under this system were not thought to be performing the functions that are the cause of their very existence.

But read to-day just why the recent stock market crash is not expected seriously to affect industry. The principal reason given is that stocks throughout the country are small and must be almost immediately replaced. The fact that buying has been from hand-to-mouth is given for the reason why orders from retailers to wholesalers, from wholesalers to manufacturers, must continue in an unbroken stream even though they be of slightly less volume for a short period.

Nothing gives confidence to business men like frequent orders, and nothing is more discouraging than a long period of practically no demand. The orders that must be placed for all sort of goods due to the lack of stocks, or rather due to the condition of hand-to-mouth buying that has been the rule during the past ten years are bound to convince business men that industry is on a sound basis and that there can be no long or sharp business depression. Then when the realization is general that there is nothing to worry about, those who have complained about this terrible condition of hand-to-mouth buying for so long a time should realize that it is one of the greatest economic blessings that was ever visited upon this country.

McKesson & Robbins Cited

Citation of McKesson & Robbins by the Federal Trade Commission comes as distinct surprise to the great majority of the drug trade. There has been but little thought, if any, that such an occurrence was likely. But now it seems that the Commission is of the opinion that the company has violated Section 7 of the Clayton Act in acquiring the stock of competing companies. The complaint states that the effect of the acquisition of the stocks of these companies by McKesson & Robbins will be to substantially lessen competition, restrain commerce in drugs, medicines and other articles of the wholesale drug business, and to tend to create in McKesson & Robbins a monopoly in these products.

While it is for a court to decide whether or not McKesson & Robbins has violated the law in its formation, it may be said that so far as the claim of lessened competition as a result of the merger goes, just the opposite is true. Everyone connected with the drug trade knows that McKesson & Robbins extended the discounts to the retailers in order to permit these retailers to buy on a footing equivalent with the chain stores. Everyone also knows that this move on the part of McKesson & Robbins was immediately met, and in some cases bettered for the retailers, by the independent wholesalers who operate in various parts of the territory covered by McKesson & Robbins.

We know not where McKesson & Robbins will stop expanding and therefore, we are unable to answer the charge that McKesson & Robbins is tending to create a monopoly in the items of the drug trade. But as far as we can see at the present time, they will merely take unto themselves a very definite and also rather large part of the manufacturing and distributing part of the drug trade, and that other large groups as well as some independents will control the remaining parts. McKesson & Robbins does not appear to us as a likely drug monopoly, but merely as one of the larger concerns that are now the rule rather than the exception.

Ten Years Ago

From our pages January, 1920

The formation of the Executive Committee of a new chemical and drug club has been completed. Members of the committee are: A. A. Wasserscheidt, of Malinckrodt Chemical Works; F. J. McDonough, of McKesson & Robbins; Chas. L. Huisking; P. C. Magnus, of Magnus, Maybee & Reynard; Carl Vietor, of Rockhill & Vietor; Theo. Rautenkrantz; J. Cody, of Hoffman-la Roche; J. W. Lyon. Geo. P. Huisking, chairman of the club pro tem, expects to call a meeting of those interested in becoming charter members of the new club as soon as the details of organization are reported by this committee.

The main warehouse of Schieffelin & Co., New York wholesale druggists and manufacturers, was threatened with destruction by a fire which started in the crude drug department about four o'clock in the morning. The damage, resulting more from water than from the fire itself, will run into many thousands of dollars. Large quantities of botanicals, which at present are exceptionally scarce in this market and practically impossible to replace, were burned or ruined by water.

Do you give your product a real chance to sell?

HOW do you present your product to the public? Do you do it in the most modern way? Do you package it in a container that gives it every chance to sell—that's modern in design, colorful to attract buyers.

Canco containers are designed to give your product every chance to win sales—every chance to gain lasting favor from customers. Their lithography is impressive. Their construction outstanding. They'll keep your volume swinging upward, and give your brand a real opportunity to maintain its leadership in sales.

AMERICAN CAN COMPANY

CONTAINERS OF TIN PLATE - BLACK IRON - GALVANIZED IRON - FIBRE

METAL SIGNS AND DISPLAY FIXTURES

CANCO

NEW YORK
New York Central Building

CHICAGO
104 So. Michigan Avenue

SAN FRANCISCO—111 Sutter Street

Even Viosterol--

Finds Sales Plans a Bar to Stable Prices

Five manufacturers of Viosterol starting together, find that their different types of sales policies work to the advantage of certain manufacturers of this standard product. The effort of other manufacturers to place themselves on an equal footing has demoralized the retail market.

A SITUATION of unusual interest to those concerned with the merchandising side of drug products has existed for some months with regard to the marketing of Viosterol—the synthetic vitamin D manufactured under licenses from the Steenbock Foundation of the University of Wisconsin, holders of the patent on the manufacture of this product.

In the short period of eight months since this product was first placed on the market by the present manufacturers, two controversies have arisen. The first, which is now settled, concerned the naming of the product. The name coined by the Council of Pharmacy of the American Medical Association is Viosterol. This name is supposed to be used by all manufacturers whose products are Council Accepted. But Mead, Johnson & Company had coined its own name, "Acterol," before the name "Viosterol" had

Three packages containing Viosterol. The 5 cc. bottles are Squibb's and Mead Johnson's Viosterol in oil, 100 D., and the 3 ounce bottle shows Parke Davis cod liver oil fortified with Viosterol.

been coined by the Council. A controversy arose between Mead, Johnson & Company and the American Medical Association which resulted in a rather spirited editorial appearing in the A. M. A. Journal in defense of its own coined name and pointing out the fact that Mead, Johnson & Company were still using their own name. However, a recent announcement by Mead, Johnson & Company states that this company has deferred to the wishes of the medical profession and will henceforth use the name "Viosterol."

But the present controversy is much more involved and much more far reaching than a mere difference of opinion on nomenclature. It involves the varying methods of distribution and the varying scale of discounts used by the manufacturers of this product that is supposed to be marketed in a strictly ethical fashion without direct appeal to the consuming public. And it involves the wisdom of selling druggists directly or through wholesalers, as well as the distribution of free goods on an item of the type of Viosterol, or of cod liver oil fortified with Viosterol.

Five Manufacturers

In the first place it is quite generally known that there are five manufacturers licensed to manufacture the product. These manufacturers are: Abbott Laboratories; Mead, Johnson & Company; Parke, Davis & Company; E. R. Squibb & Sons; and Winthrop Chemical Company. The licenses granted to these manufacturers include an agreement on the strengths and sizes of packages in which the product shall be offered for sale. Also the retail selling prices at which these various packages shall be listed for sale are included in the licenses agreement. But, strange to say, this product, apparently well controlled as to production and marketing, is being sharply cut in price to the extent that the dollar bottle of fortified cod liver oil is selling in some instances at 63 cents per bottle.

The cause of this surprising state of affairs which is causing considerable concern to practically all five manufacturers of this product seems to lie in the fact that the five manufacturers do not market their products in the same manner to the retail trade. Of the five manufacturers, two are said to distribute their goods by the old style method of selling the wholesaler only and letting the retail trade go to the wholesaler. These two are Mead, Johnson & Company and Winthrop Chemical Company. The three remaining manufacturers have somewhat similar methods, but yet these methods are so different from one another that it is difficult for even these three to come to an agreement.

The Squibb method of distribution is quite well known. They attempt to sell the retailer direct as far as it is commercially possible and grant him a long discount of 40 per cent. or more. Where a wholesaler steps into the picture, Squibb will give him no more than they will give a retailer unless the wholesaler will buy in gross lots under which condition he will get an extra 15 per cent. The wholesaler is offered no greater discounts than the retailer for like quantities, and the only way in which the wholesaler can sell Squibb goods profitably is to take advantage of the additional 15 per cent. by buying gross quantities and then distributing in dozen lots or less.

The Parke, Davis method varies somewhat from the Squibb method in that Parke, Davis will give the wholesaler an additional 15 per cent. over the retailer when the two buy in dozen lots. The Parke, Davis system is quite complicated with its preferred accounts and so forth, but while Parke, Davis does attempt to sell the retail trade direct as far as it can, they do give the wholesaler slightly more co-operation or support than Squibb does in that Parke, Davis differentiates between the two types of distributors to the extent of an additional 15 per cent. to wholesalers on dozens.

Retailer Seeks Bargains

While Abbott Laboratories also attempt to sell direct as much of the retail trade as they can, the method which they use is still different from that of Squibb or Parke, Davis. Here we find a method built upon increased discounts as the size of the orders for the various goods in the Abbott line mounts. Thus if a man were bo buy $80.00 worth of Abbott goods, he can earn an increased discount on the whole order if he will increase the size of the order to $100 by taking $20 of some other items.

The retailer is no different from anyone else in that he will attempt to buy an item as cheaply as possible. The retailer may use the cheaper price to yield himself a longer profit or he may use it to cut the price. In the present situation, sufficient of the retailers have used the advantage in buying Viosterol from these various manufacturers to cut the price of the item to such an extent, that general demoralization of price on the articles exists.

It can be seen that under the foregoing varying methods of discounts and marketing, the retailer is in a position that must be used to advantage if he is to be in a competitive position in selling Viosterol and still be able to make a profit or at least break even. And due to the fact that the item is new and in quite brisk demand, he must watch his position in it rather keenly.

The attempts of the retailer to buy Viosterol as cheaply as they can—since the doctors and the public would quite readily accept almost any of these well known manufacturers—has led him to favor one of the three manufacturers selling direct and giving him longer discounts than he could get from the wholesaler on the goods of the other two manufacturers. As to which of the three direct selling manufacturers he is

choosing, this has resolved itself down to whether he is a preferred account of Parke, Davis, or whether he is a Squibb distributor, or whether he can add viosterol to an order from Abbott and thus boost the size of the order to the point at which it will bring an additional discount. Naturally if he is a preferred account of Parke, Davis, he will have a lower cost on this brand than a retailer who is not a preferred account. And if he is a Squibb Distributor operating under Squibb Plan, Inc., he will thereby gain an additional three to five per cent. But if he is neither of these he might boost his order to Abbott by the addition of Viosterol to a point where the Viosterol increased the discount on his whole order by 5 per cent. In this case he might use the 5 per cent. on the whole order to reduce his cost of Viosterol in which case the cost of this one item would be ridiculously low.

Two Makers Suffer Most

With this method of figuring on the part of the retailer going on, it is only natural that its effect should make itself felt to the other two manufacturers selling by the old method of only wholesalers direct. Here is a case of a new item that was admittedly the same thing no matter from whom it is bought. There might be some slight consumer preference in restricted territories, but due to the fact that the goods of the five manufacturers all bear the statement that they are made under the Steenbock patent, they all look quite alike in the consumers' eyes. Thus on an even basis, the direct selling methods were evidently leading in sales due to the lower costs to the retailer.

But it is stated that at least one of the other two manufacturers would not sit idly by and the bulk of the business go to the three direct sellers. Some steps have to be taken to overcome this situation, and the only steps that could be taken were those that reduce the price to the retailer. The only way that the price to the retailer could be readily cut was by the well known practice of distribution of free goods. Therefore, it is reported that some such scheme as a dozen free with every dozen bought was inaugurated.

Whether it was the long discounts of the direct selling manufacturers or the distribution of free goods that brought the present demoralization does not matter particularly, but probably the real cause was a mixture of the two. However, to-day the manufacturers are busily engaged in attempting to overcome this undesirable condition on a strictly ethical item for which the public will readily pay the list prices when they have need for it.

Some of the manufacturers are said to realize that the only method by which the situation can be corrected is by an attitude of give and take until a satisfactory compromise is devised. It is further reported that one of the manufacturers committed to a plan of direct selling on all the items in its line, is ready and willing to abandon this policy on the items in the Viosterol line in order to bring the market back to where it should be. But a stumbling block is presented by at least one of the other direct selling manufacturers who has refused to yield any ground. This manufacturer has always sold goods by the methods that it wanted to use, and the executives of this firm are said to see no reason why they should change these methods at a time when they are working out to great advantage in competition with other manufacturers.

In the center of the picture sits the representatives of the Steenbock Foundation receiving complaints from the various licensees, and trying to arrive at a satisfactory conclusion. The manufacturers are for the most part working through the representatives of the Foundation.

No Regard to Merchandising

Looking back over the short time that Viosterol has been marketed, it is easy to see that the license agreements drawn up by the Foundation were made with too little regard for the merchandising aspect of the product. By fixing the list prices of the items and not fixing the discounts, the agreements fixed something that is beyond the control of the manufacturers under present conditions. The manufacturers can name list retail prices and can print these prices on the packages, but it is well known that control of the actual retail selling prices is a difficult, costly and hazardous undertaking. And it must be realized that when five manufacturers start from scratch on an item that is the same with all, attempts to maintain prices in the retail trade are not apt to be sincerely undertaken by one or more members of the group if the remaining manufacturers do nothing to correct the condition and even go so far to gaze upon it with a certain pleasure.

The situation seems to be one of endorsement for direct selling methods by the large manufacturers, and also one of the futility of attempting to maintain prices on standard items unless the public can be educated to a point of what may seem to some as undue confidence in the manufacturer of the items on which the prices are maintained.

It is quite possible that the situation will be corrected within a comparatively short time. But the basic principle that underlies this present condition is of interest to a much wider group of manufacturers than the five who manufacture Viosterol. For here is a case of a group of five of the most ethical and reputable houses agreeing to maintain a set of retail prices and then being seriously hindered in the proper development of their share of the market by retailers using their various sales policies in a manner that creates undue competition among them within the trade itself.

Rosenthal to Buy for D. S. C.

A new department of the Druggists' Supply Corporation, which in the words of Warner James, general manager, Towns and James, Brooklyn, will greatly overshadow any other work in which the Druggists' Supply Corporation is engaged, has been instituted with the appointment of H. H. Rosenthal Company, 15 Park Row, New York, to act as purchasing agent for all the members of the Corporation in their purchases of drugs, chemicals, essential oils, pharmaceuticals and raw materials.

According to Mr. James, who in charge of this department of the D. S. C., the appointment of the Rosenthal Company—operated for 10 years by Herman H. Rosenthal—marks the beginning of co-operative purchasing of these products by the D. S. C. This is a natural development of the work of this organization, stated Mr. James, which was formed to permit its members to take advantage of the large volume of business that they do collectively.

It is now compulsory for the members of the organization to purchase their supplies through the Rosenthal Company, stated Mr. James, but it is only natural that this department will receive active support from the members since they all must realize the importance of this service to them, and since they also must realize that the service will be greater the more support it receives.

The Druggists' Supply Corporation is a closed corporation which lists approximately 117 independent wholesale drug houses throughout the country as its members. These members probably have a collective purchasing power in raw materials greater than any of the combinations of wholesalers or any of the individual chain store systems operating in the drug trade.

Herman H. Rosenthal is a figure of long standing in the New York drug and chemical trade. He has acted as a broker in drugs and chemicals, and has for a long time acted in the capacity of purchasing agent for several important and well known consumers of these commodities.

Heuisler Heads Drug Exchange

Philip I. Heuisler, Emerson Drug Co., Baltimore, is the new president of the Baltimore Drug Exchange, Vice-presidents, also elected at the annual meeting of the Exchange held in December, are: P. P. Wohnlich, Parke, Davis & Co.; A. Homer Smith, Sharp & Dohme; Treasurer, J. Emory Bond, Leroy Oldham & Co.; Secretary, William J. Lowry, Gilbert Brothers & Co. Additional members of the executive board are: James Carey, James Bailey & Son; William Graham, William Graham & Co.; John C. Muth, Muth Brothers & Co.

Health Products Restrains Imitator

Health Products Corporation, Newark, N. J., have been granted a permanent injunction by Justice Alfred H. Townley in the New York Supreme Court restraining Joseph Muskin, doing business as the A. K. Gum Products Company from using for a laxative gum containing phenophthalein the name "Phen-a-mint" in imitation of the name "Feen-a-mint" and from marketing the product in cartons which imitated in appearance, the cartons used by the Health Products Corporation. A similar injunction was granted on consent against a retail druggist who was a customer of A. K. Gum Products' Company.

By the provisions of the judgment of the Court, Muskin (A. K. Gum Products Company) is permanently enjoined from using the name Phen-a-mint and also from manufacturing, advertising, selling or attempting to sell laxative chewing gum in any box or carton, or from using any box or carton bearing the device of an oval superimposed upon a background of dots or substantially imitating the box or carton used by Health Products Corporation.

The Court in addition to awarding the costs of the action of Health Products Corporation, also referred the matter to a referee for the purpose of determining the profits that Health Products Corporation would have made on the sales which the A. K. Gum Products Company made of the imitation products if such sales had been made by Health Products Corporation. So a further judgment for damages covering these profits may be granted in favor of Health Products Corporation.

Manufacturing Turnover Should be 9

By Francis Chilson

Production Manager, Marinello Company

Proper methods on the part of the production manager can raise the rate of turnover in drug trade manufacturing now 5 for drugs and 4 for cosmetics.

SINCE the processes of the pharmaceutical and cosmetic industries are so similar, the procedure outlined in this article applies to either. What follows then is the result of considerable practical experience in controlling production in these industries, and not pure theory. The limitations of space make it impossible to follow through all the ramifications of a system for the control of production, hence, only the bold outline will be touched on, leaving other equally important but corrollary phases of factory management for treatment in subsequent articles.

To begin with a scientific system for the control of production makes possible increased profit through faster inventory turnover; through reduction of costs; and it provides for the maintenance of fresh stocks.

Faster inventory turnover increases profit by releasing working capital for application to other phases of the business. By decreasing the size of the inventories, profits are increased through savings in insurance, and savings in the amount of floor-space required for finished stock. For example, if company A carries an average inventory of $200,000.00, and has a cost of sales of $800,000.00; its rate of turnover is 4. If by careful management it can increase its turnover to 8, it will have released $100,000.00, the interest on which at 6%, amounts to a saving of $6,000.00 per year. Incidentally, the average turnover in the drug industry is 5, and in the cosmetic 4. Our experience proves that a turnover of 9 can easily be attained for either industry; and, when only a few products are carried in the line, turnovers from 12 to 25 are possible.

Production control decreases cost by increasing production per worker, by faster handling of materials in process, by prevention of waste, by prevention of idle time, by prevention of bottle necks in the flow of product through the mill, by establishing production and cost standards and maintaining them all through the manufacturing procedure. Efficient manufacturing is essentially a problem of handling materials. So various are the factors which contribute to a reduction of cost such as effective purchasing, cost accounting, proper layout of *properly selected* equipment, that detailed treatment must be left for later and more specialized articles.

The first step in setting up a system of control begins with an analysis of sales. This analysis should be in units and not in dollars. It should be grouped

by products: creams, lotions, powders, tablets, etc. Each group should in turn be classified by size of package: 1-oz., 2-oz., 6-oz., etc. In passing it is well to point out that if your line has a proper number system, this classification is done automatically by merely listing the products in numerical order. In the Marinello Company this is carried out. It is possible to tell by the number of the item whether it is a cream, a powder or a lotion; and what its size is, in the case of creams and lotions; and its shade in the case of powder or rouge.

The next step requires the taking of inventories of finished stock, raw materials, finishing materials—jars, bottles, labels, etc.

What is sold, and what is on hand, is now known and the next step involves the design and setting up of the schedule. Such a schedule can be on a printed form, it can be on a board with suitable divisions, it can be in any form. The form is usually dictated by the size and nature of the line. In the Marinello Company a printed form is used whereon space is provided for all necessary information; and provision is made for planning production and scheduling purchases for three months in advance.

Items in Schedule

The schedule should show:—Article number and name, size of batch and number of finished units it will produce, time for manufacturing and packaging a batch of goods, average monthly sales for the previous year (sometimes it is wise to provide four columns to show average monthly sales fot the four seasonal periods). sales estimates for the coming year, minimum stock to be carried, maximum stock to be carried, inventory at beginning, appropriations of stock for assemblies, sales for the current month, current production; the latter is a major caption, below which, is provided spaces for production order number, date to be made, quantity to be made, date finished, quantity finished, and finally, inventory at the end. Beginning with appropriations of stock for assemblies to inventory at the end, constitutes a section which is repeated for as many months as may be required. All the information up to appropriations is fundamental information which does not change through the year, and the sheet itself up to that point acts as a master sheet to save clerical work as the monthly sections become used up. If a printed form is used as a production schedule, only three monthly sections can be provided if it is not to become unweildly. The schedule used at the Marinello Company measures 17x28 inches, which is the maximum size which can be handled with comfort.

This schedule is in effect a perpetual inventory and is designed to be operated by a clerk. All the factory manager need concern himself about is the adequacy and correctness of the fundamental information; he confines himself to the monthly schedules.

With the information outlined above before him, the factory or production manager needs to consider but few facts, viz: Average monthly sales for the previous year and sales expectancy this year, compared with the actual inventory on hand, and the minimum stock to be carried tells him whether to manufacture or not. If he decides to manufacture, he will make only what is required to bring the stock up to minimum and not over maximum.

The clerk then issues the necessary production orders and enters them on the schedule under the caption "production." At the end of the month the clerk enters the actual sales, and calculates the inventory at the end, which in turn, becomes the beginning inventory for the following month's schedule; and then the process is repeated. In the Marinello Company production is determined for three months in advance and checked monthly against actual performance.

The appropriations column is used to show usage of stock in making up sets like treatment sets or Christmas packages.

The production orders referred to above constitute the instructions to the factory as to when and how much of any given product is to be made. A set goes to the manufacturing department and another to the finishing department. Space is provided on the form for detailed instructions and the necessary formulae. Copies are sent to the store-house to act as a requisition for materials to be delivered where needed on the specified date. A copy of the order acts as a labor report. In this way all costs are automatically assembled on one set of forms—i. e. labor and material. When the orders have gone through the mill they are returned to the production department, entered on the schedule, and then turned over to the cost accounting department for the calculation of costs and the posting of inventory records.

Finishing materials are controlled in a manner very similar to finished stock. From a beginning inventory is taken the materials used in production, to which is added materials purchased to establish the inventory at the end. If it is possible to group your products by sizes, the bottom of the same sheet can be used for the control of finishing materials for the group. Otherwise, it is necessary to set up separate sheets which will show the number and name of item, (if purchased on contract, the date, amount, and price; and a series of columns for contract balances at the end of every three months) the inventory at the present, average monthly consumption for the previous year, average monthly consumption this year (based on sales estimate), etc.

In such a manner is it possible to keep under constant review all the factors relating to a control of the inventories, and effective plant operation. Once the

(Continued on page 66)

That Mutual Scheme

By Robert R. Ellis

Some important facts regarding the plan of the Mutual Drug Co. of Cleveland, heretofore told only to the wholesalers approached, are revealed in this letter written to these wholesalers by Mr. Ellis. A confirmation of important facts recently revealed exclusively in Drug Markets also appears.

NATURALLY a plan so evolutionary, far reaching and extensive requires first hand information fully and completely for a clear understanding. Unintentional misrepresentation and misunderstanding naturally would follow otherwise. I will try and straighten out a few that have come to me.

On the Ure Druggist plan of wholesale purchasing here is the plan.

Stock $3,500.00 combination of package drugs, pharmaceuticals and home remedies. Pay $500.00 per month. Open account—no notes. Ure Druggist retailers will buy more than that each month. Thereafter, wholesaler buys to fill his needs. He writes his own orders. Twice a year you are allowed to clean up your stock. We request that you return all overstock, unsalable or damaged stock in exchange for new goods or cash. What is wrong with that ?

We do not require that you discard any line of merchandise that you now have. We are not pushing a full line of pharmaceutical products. We know that 70% of the pharmaceutical business is done on 157 items. We furnish you the Burroughs Brothers products of these 157 items on a basis that you can sell them to the retailer at a considerably less price than he is now paying for the same items. Naturally he will specify Burroughs Brothers products which are of the highest standard. Burroughs Brothers by the way were the first manufacturers of fluid extracts in America. Many of their formulas and recipes were recognized and used in the preparation of the first National Formulary Book and U. S. Pharmacopoeia.

Package goods are sold to the retailer at a price that permits him to get the business against grocery store or chain store competition, therefore, you get the business, a larger turnover and more final net profits on your investment. Home remedies are on the same basis. Burroughs Brothers "Money Makers" specials are winners.

Warehousing

It is urged that zone super warehouses would be expensive to maintain. Answer. It would be no expense or liability to the wholesaler. That is our job. We know what we are doing and we can render you that service greatly to your profit. For instance, where you get 15 and 5%, which equals 19.25% and have to buy four months' supply, your net profit on investment per month is 9.8%. If you buy six months' supply it is 7.0% and if you buy eight months' supply it is 5.4%. From us you buy a thirty days' supply and your percentage of profit on average month's investment is 17.6%. Think it over. There are more gold mines in this plan made sanely, soundly available for you than you know of. We know exactly what we are doing.

This centralized warehouse idea is the biggest thought that has come into the channels of merchandise distribution in the last decade, if you know how to operate it. We do, and stand ready to prove it.

One Per Cent. on Mutual Sales

One of the largest, most thoughtful wholesalers after listening to my explanation of our plan said, "Bob, I am sold. You have it. Your plan is sound. It is all right and I am practically signed on the dotted line, but want to talk it over with my associates." He came back with a letter that after thinking it over he could not figure how he could give 8% to his customers

and 1% to the Mutual and still operate profitably. *Of course he could not.* What in the world does he, or do you, think we are charging the 1% for. That is our duty—our obligation. That is our guarantee. That is what we are paid for. We would not have the nerve to ask 1% on new volume of business if we did not know that we were going to give you several dollars in service and profit for every dollar that you pay us. We show you how you can do it. You can do those things and still operate more satisfactorily, more profitably than you are doing to-day and meet any and every form of competition. We have had absolute, indisputable, tried, tested experience. We have done it for others. We are still doing it profitably.

Some others stated:—"We could fire our salesmen, cut down our working force, get auditors to set us up a system of accounting; we could analyze the Mutual's invoices and get the same discounts." Yes, you could do those mechanical things, but could you do it orderly, systematically and successfully ? Coca Cola has had a thousand imitations, millions of dollars have been poured into them, but none of them have succeeded, even though, no doubt, some of them had exactly the same formula. Why ? Because Coca Cola is Coca Cola and the people behind it had years of experience—it has a soul and a spirit, and there are just some things different. As Kipling says:

> "They copied all they could follow
> But they couldn't copy my mind
> And I left them sweating and stealing
> A year and a half behind."

Nobody in the world has the Roosa plan except Roosa and Ellis. One per cent. on Mutual sales only is a terribly small amount to underwrite, insure and secure the success of your business. We know how.

We make no charge for sales in your service department and if we do not create sales in the mutual department we do not get anything. We also insist that you maintain a certain sales force. We know exactly how many you need and how to place them, and we impart that knowledge to you. It is our duty and our contract to show you how these changes can be made systematically without rupture or disturbance to your business, and work with you until you get them thoroughly.

Just think of a man and a plan that twenty years ago started from nothing and has now forced its way up through every known opposition. Think of it! Did you ever hear of any business, or type of business, that had about two hundred and fifty service wholesalers fighting it, using all of their powerful influence against it from every angle, and still it progressed and became the largest independently owned wholesale drug business in all of America ? All of that fighting is past. We all recognize merit where real merit exists, and we know that the stone that the builder rejected will become the keystone of the arch.

I have had a dozen of the best wholesale druggists in the United States in the last few months, many of them before I explained my plans, to make this statement. "There isn't any doubt about it—the Mutual has the system and we have known it for some time." A big Chicago swholealer said that to me last week because he had been up against it.

We have got to change. Twenty-three wholesale-grocers were put out of business in the city of Memphis in five years because they refused to recognize the necessity for change. I will tell you more about that later—in another letter. Let's not let this thing happen to the service wholesaler.

We are all rather complacent at this time because we think we are doing fairly well, but the big forces have not yet really begun to get into full action, but they are organizing for battle and believe me the individual unit, standing alone, even though strong hasn't a chance against the oncoming tide of changed conditions.

We have the plan that working together shows the way out. It is invincible. There is no known competition that can operate half so economically or satisfactorily, or more profitably.

Industry's Bookshelf

Properties and Uses of Drugs, by Henry H. Rusby, Dean of College of Pharmacy at Columbia University; A. Richard Bliss, Jr., Dean of School of Pharmacy, University of Tennessee; and Charles W. Ballard, Assistant Professor Materia Medica, College of Pharmacy, Columbia University. Cloth bound, 823 pages. Published by P. Blakiston's Son & Co, Inc., Philadelphia.

Contains information as to the origin, preparation, preservation, commerce of drugs, of any adulteration or other imperfection to which they are especially liable, their standards of quality and strength, composition, and general properties and uses.

The authors have not discriminated in their listing of products on the basis of merit and repute. Rather they listed everything that is in common demand, and, therefore, not only all the products listed in the Pharmacopoeia and the Formulary are included, but also a number of products not found in either of these books.

The Manufacturer and His Outlets, by Chester E. Haring, of Batten, Barton, Durstine & Osborn. Cloth bound, 190 pages, Published by Harper & Brothers, New York.

A very interesting and revealing work that represents a very intelligent discussion of the forces that have been at work in changing our distribution mechanism. Interesting facts are given regarding mail-order houses, chains and independent retailers. The drug trade receives the real attention that it deserves, but the presentation of the whole distribution problem is of much more value than the meritorious discussion of the drug trade alone.

Chemical Dictionary, by Ingo W. D. Hackh, Professor of Chemistry, College of Physicians & Surgeons, a school of dentistry, San Francisco. Cloth bound, 790 pages. Published by P. Blakiston's Son & Co., Philadelphia.

An extremely valuable volume. A real dictionary of chemistry which contains not only the words generally used in chemistry, but also many of the terms used in the related sciences of physics, atrrophysics, mineralogy, pharmacy, and biology, with their pronunciations.

Preserving Pills

By H. Eschenbrenner*

Control of bacteria in raw materials and the prevention of mold formation are accomplished by use of paraoxybenzoates

THERE is a general tendency to use methyl paraoxybenzoate, known in the trade (Germany) as "Nipagin," for preserving anything that will not keep. The desirable thing to do, when it is necessary to preserve or stabilize medicinals as well as foodstuffs, is to use a preservative or rather to secure preservation in as far as possible unchanged, natural state without the use of a chemical. Examples may be mentioned of stocks of syrup Rhei and syrup Mannae which were stored in well closed bottles in cellars, in the first case since 1918 and in the second case since 1922, without any mold formation, as well as of certain examples of pills which will be mentioned later. These pills, which were made under the proper conditions and with due skill, are able to keep in unchanged state for years. They indicate that the use of a chemical preservative is unnecessary.

However, if care is not taken to store products under proper conditions, there is always danger that certain preparations will spoil. The Pharmacopoeias give exact information on the methods that should be used in making medicinals and in storing after they are made. Thus in the case of certain syrups, such as mucilage of salep, the preparation must be made fresh each time. Also mucilage of acacia, substance must be kept in small flasks in the cold, the flasks being quite full.

Experience has taught the dispenser of drugs that in spite of these directions of the Pharmacopoeia and also of the manufacturers, the medicinals will sometimes spoil. Mention should be made of adeps benzoinatus and zinc ointment which are preparations that must be preserved in some manner. Adeps suillus is stabilized by the addition of two per cent. of benzoin, which prevents rancidity.

Benzoin consists of approximately 20 per cent. free benzoic acid (limits are 19 to 24 per cent.), and from 70 to 80 per cent of a mixture of two esters of benzoic acid with resin alcohols, the white benzo-resinol and the brown sia-resinotannol. It is just a step further to preservation of drugs with aid of methyl paraoxybenzoate, use of which is distinctly advantageous in that its composition is constant, while composition of benzoin varies. Experiments have proven that the same results are obtained by using 0.12 to 0.2 per cent. methyl paraoxybenzoate in the place of two per cent. benzoin. The sole test that the G. P. gives for determining whether or not adeps benzoinatus is rancid is that it must not smell rancid. It has been found from experience that this preparation will not smell rancid indefinitely. Mention should, however, be made of the degree of acidity of the product, without any intention of indicating that this should be used as an indicator of the keeping qualities of the drug, to the effect that the degree of acidity was changed only in an inappreciable manner after half a year. Acidity of the drug is not affected in any way by the addition of the preservative.

A similar experience has been obtained with oleum cacao. Attention is also called to certain experiments carried out on the manufacture of suppositories (Pharmazeutische Zeitung, 1929, number 31.) A review of the practice in preserving foodstuffs indicates that the use of benzoic acid amongst the official preservatives is permissible at times without indicating its presence, naturally within the limits which avoid any injury to health (0.15 per cent). It has been observed that in the use of methyl paraoxybenzoate for this purpose, no injury is noticed up to the present time in preserving mucilage of salep, the preservative being used in the proportion of 0.1 per cent.

Experiments made with methyl paraoxybenzoate have been supplemented by those made with ethyl paraoxybenzoate, a preparation known by the trade name "Nipasol." It should also be mentioned here that the sodium compounds of the acid have also been prepared and have been used for similar purposes. The advantage is that the sodium compounds are soluble in water. Ethyl paraoxybenzoate is almost tasteless. On the other hand when methyl paraoxy-

*Pharmazeutische Zeitung, 1929.

benzoate is used, it has been found at times that the taste of the medicinal is altered. The ethyl compound has been used for preserving Mel depuratum, gum arabic mucilage, Sol. Succ. liquir., as well as adeps suillus and oleum cacao. It has been found that a concentration of 0.1 per cent. of the ethyl compound is sufficient to preserve any medicinal, to prevent the formation of molds, even though the preserved medicinals were kept in open bottles in a box for four weeks along with other materials which were full of mold growths. About 0.15 per cent. of ethyl paraoxybenzoate was added to fats in the melted state. The degree of acidity of the fats remained unchanged over a period of six months, and there was absolutely no rancid odor detectable.

Experiments on Pills

The experiments made on methyl paraoxybenzoate were extended to include pills. Care must be taken to prevent the formation of a culture medium in the pill mass from the bacteria found in the raw materials. Whether we choose to mix Succ. and Rad. liquir or cenomass with any binding liquid, such as mucilage, distilled water and glycerin ana, a syrup or an Extrac. spiss. and whether or not the finished pills are covered with lycopodium, talc or bole, makes absolutely no difference, for all the aforementioned materials contain more or less bacteria. The vitality of the bacteria varies, but moisture is essential to their growth.

The absolute quantity of moisture, required for the development of any and all kinds of micro-organisms, is given in different magnitudes in the literature. For example, R. Meyer in his article, entitled "Mold Fungi and their Nutrient Media," published in Apotheker Zeitung, 1915, pages 85ff, says that at least 15 per cent. moisture is required. Spieckermann and Bremer Landw. Jahrb., 31, 1902) say 12 per cent. moisture is necessary for growth of molds, 30 per cent. for the growth of bacteria. These figures have only a limited value based on the nature of the substances used in experiments. Due to the different ways in which the substances behave, limiting values for the water content, which will serve in all cases, cannot be given. It therefore remains to indicate the absolutely limiting value of moisture at which no organism in general can develop.

H. Walter, in a study of the moisture saturation of plants and its importance to growth of the plant (Zeitschrift fuer Pflanzenernaehrung und Duengung, 1926, A, 6) states that the limiting value lies at 85 per cent. relative vapor tension. In order to use this idea for developing a theory and establishing a basis to be used in the preservation of pills and other medicinals, it is necessary to describe Walter's work briefly. Walter starts with the idea that it is not important from the standpoint of the organism to have water present in the substratum, but that it is possible to absorb the water necessary for growth. This possibility depends mainly on the force with which the substratum retains the water present in it as water of hydration or swelling for the most part, that is on the suction force of the substratum. When a solution or a substance swollen with water gradually loses its water, then its suction capacity for water increases and the relative water vapor tension at its surface decreases. This indicates that the relations between the magnitude of the suction force and the relative vapor tension for all solutions and swollen substances are alike, so that an approximate ratio exists between the increase in the force of suction and the decrease in the relative vapor tension.

The correctness of this assumption can be learned from examination of a compact substance, a seed corn or a fruit, which is covered with bacteria and molds on the surface only, in which case the water ratio on the surface would be decisive. Fruits, which can contain a great quantity of water, become moldy due to the fact that they are not covered with a dry skin. On the other hand, in the special case under consideration, pills pressed in the moist state and allowed to dry in air, of which the relative vapor tension (humidity) is for the most part not above 70 per cent. under normal conditions, pills will dry out sufficiently well to prevent development of molds. But if these pills are kept in closed bottles, the air within the bottles gradually becomes more moist due to the evaporation of moisture from the mass of the pills. The surface of the pills becomes more and more hydrated, and hence the relative vapor tension becomes higher, until molds begin to grow at a point above 85 per cent.

Two Points in Manufacture

There are, therefore, two important points which must be taken into consideration in practical work in manufacture. The first consideration is how much moisture the mixture from which the pills are made contains or must contain in order to make possible the growth of molds, or how great is the relative vapor tension or relative humidity. The second consideration is which of the raw materials used are more or less contaminated with molds.

In order to obtain some basic information from which conclusions can be drawn, the water content of various pill preparations was determined. The following are some of the results obtained. Pills of compr. laxativ. vegetab. two years old contained 14.7 per cent. moisture; pills of laxant. fort. six months old contained 11.5 per cent. moisture; pills of extrac. belladonna three days old contained 16.2 per cent. of moisture; pills of quinidine sulphate one day old contained 10.4 per cent. of moisture. A sample of quinine pills, which were covered with an external layer of molds, contained internally 6.2 per cent. moisture, and hence there could be no further growth

of molds in such pills, which was exactly what was observed. After the outer coating of molds was removed, the pills were perfectly stable.

All these samples were stored in air and did not show any growth of molds. This was observed even when the pills were stored close to other materials which were covered with mold growths. However, as soon as a wad of cotton, which was saturated with moisture, was brought into the closed bottles and the moisture of the air increased above a certain limit—in other words the vapor tension of the atmosphere or the relative humidity increased above 85 per cent., or when the pills were allowed to remain in such an atmosphere—the growth of mold slowly began.

A series of experiments were carried out for the purpose of obtaining an explanation of the second question, namely the concentration of bacteria in the various materials used in the manufacture of pills. The results obtained from this investigation are given in the following tabulation. These substances were brought into contact with a nutrient medium in separate tests and bacterial growth was allowed to take place. The nature of the nutrient medium is not important in this case and a mixture of maltose, peptone and agar-agar was used. The designations used in the tabulation have the following significance: +++ indicates a very high mold content; ++ indicates a high mold content; + indicates a slight mold content; — indicates no mold content.

Rad. Alth. Pulv.	Three times ++
Rad. et Succ. Liquir.	Once —
	Twice ++
	Twice +++
Gummi Arab. Pulv.	Twice +++
	Once —
Cenomass Zyma	Twice ++
	Once —
Extrac. Faecis Spiss. (Zyma)	Three times —
Extrac. Faecis Spiss. (Syndicate Zyma)	Twice —
	Once +
Lycopodium	Three times +++
Talc	Three times +++
Bole	Three times +++

Particular mention must be made of Extra. Faecis spiss. (zyma) which gave negative results in three successive tests. This is explained by the fact that its salt content has a preservative action. The favorable results obtained by using this substance in the preparation of pills are important. Tests were made in which pure cultures of aspergillus and lenicillium types of bacteria were injected into Extra. Faecis spiss. (Zyma) and no growth of mold was noticed on the mass as long as it was kept out of contact with nutrient media.

Pills, made from all the materials contained in the above tabulation developed considerable growths of molds when they were brought into contact with nutrient media. This has commonly been observed when lycopodium is used for covering pills. On the other hand, when pills manufactured from these materials were not brought into contact with a nutrient medium, the development of moldy growths was not observed.

If the conclusion is drawn that the danger of spoiling is not very great in pills, it is not nevertheless wise to be content, for particular care must be taken in cases where extraordinarily unfavorable conditions apply. Formation of mold growth is accomplished by the addition of methyl paraoxybenzoate to the pill mass. The need for the use of this preservative may be substantiated by mention of the case of arsenic acid pills which are decomposed to form diethyl-arsine. (Pharmazeutische Zeitung, 1919, page 650).

Pills made according to the following formula:— arsenic acid 0.1, Mass. pilul. q.s.m.f. per hundred, finished with succ. et rad. liquir. and mucilage of gum arabic, spoiled after eight days in glass containers, being covered with a grayish mold. When the containers were opened, a distinct odor of garlic was noticeable. The cause was determined to be the spoiling of the pills by aspergillus glaucus. This process was then repeated under like conditions with the use of penicillium brevicaule var. glabrum. It is known that this bacterium will likewise give a distinct garlic odor in the presence of arsenic and that it can be used to detect traces of arsenic. A portion of the pill mass finished with rad. et succ. liquir. and also containing ceno mass was treated with these bacteria, that is in one test with a pure culture of aspergillus glaucus and in a second test with penicillium brevicaule, and in a third test they were covered with lycopodium. The pills were allowed to stand. The garlic odor was noticed in all three cases and indicated that diethyl-arsine was formed.

Tests were also made in which methyl paraoxybenzoate was used. The proportion of this preservative employed was 0.15 per cent. It was found that this amount of the preservative was insufficient to prevent the pills from spoiling. It was only when a 0.3 per cent. solution of the methyl paraoxybenzoate was employed in a mixture of alcohol, glycerin and water that the pills were kept from spoiling in all cases. When the pill substance treated with methyl paraoxybenzoate was brought into contact with a nutrient medium, it was found that it was sterile. After the pill substance has been covered with lycopodium or the like and then brought into contact with the nutrient medium, the growth of molds was clearly observed,

(Continued on page 66)

{ *Patents Issued* }

UNITED STATES PATENTS

Camphene from Pinene Hydrochloride

Camphene is made from pinene hydrochloride by a new process. The pinene hydrochloride is reacted upon with the aid of a quantity of a converting agent, which in amount is considerably less than the stoichiometric equivalent quantity. The consumed part of the converting agent is regenerated by means of an alkaline compound in one continuous operation. H. Gammay, Stuttgart. U. S. Patent No. 1,721,990, filed Jan. 28, 1926.

Pulverized Milk Serum Powder

The process of preparing a pulverized milk serum powder is as follows. Skimmed milk is introduced into an autoclave and is heated to a certain temperature. The milk is then allowed to cool off. It is then innoculated with pure lactic acid cultures. Salts and saccharine materials are added. The mixtures is then allowed to stand for a time. Then a vegetable fat and a substance, which is rich in diastase, are added. The mixture is then dessicated at a cool temperature and the product obtained is finally reduced to a pulverized form. N. M. Kronberg, Rydsgard, Sweden. U. S. Patent No. 1,721,867, filed Nov. 23, 1928.

Chloro-Iodides of 2-Amino-Pyridine Salts

The new product is a salt of iodine-chloride compound of alpha-aminopyridin. These compounds contain various alkyl or acyl radicles. The free positions of the pyridine nucleus can also be substituted. These salts are as general rule obtainable in the crystalline form and are substantially stable even when boiled in acid solution from which they segregate on cooling in the form of crystals. The compounds are capable of being transformed in alkaline solution into the corresponding beta iodine derivatives of the base. Good yields are obtained. M. Dohrn and R. Dirksen, Berlin-Charlottenburg, assignors, Chemische Fabrik auf Actien, Berlin, Germany. U. S. Patent No. 1,723,457, filed Jan. 5, 1927.

Medicine for Bronchial Affections

This remedy consists of South Carolina yellow pine tar in the proportion of four drams, in which beechwood creosote has been dissolved in the proportion of one ounce. One half a pound of carbon disulphide is added and the entire mass is mixed together. A. Panalle, Washington, D. C. U. S. Patent No. 1,723,459, filed June 29, 1927.

Hemostyptic Compound

This is a new product, which has the following general formula: $R_1SR_2N.R_3.R_1$. In this formula R_1 represents a radicle including a carbon-containing cyclic nucleus, R_2 an alkylene group and R_3 and R_4 alkyl groups. The products are generally oils soluble in alcohol. These oils are capable of forming salts with acids. They are valuable substitutes for secale cornutum. H. Hahl and L. Schuetz. Elberfeld, Germany, assignors, Winthrop Chemical Co., New York, N. Y. U. S. Patent No. 1,723,695, filed Aug. 27, 1923.

Pharmaceutical Product

Urea is treated in the presence of an alkaline reacting agent with a compound of the following general formula:—$X.R_1.N.(R_2)(R_3)$. In this compound X represents halogen, R_1 an alkylene group and R_2 and R_3 either alkyl groups or hydrogen atoms. H. Hahl and L. Schuetz, Elberfeld, Germany, assignors, Winthrop Chemical Co., New York, N. Y. U. S. Patent No. 1,723,696, filed March 24, 1927.

BRITISH PATENTS

Cultivating Bacteria and Vaccines

Bacteria for use in the preparation of vaccines are cultivated on a medium free from animal albumen and containing juice obtained by expression from vegetable substances and particularly from fruits rich in sugar and poor in acid. According to an example juice expressed from ripe bananas in a filter press is sterelized at a temperature of 40 and 50° C. Half a per cent. of common salt and 2.3 per cent. of sugar are added, and the whole is filtered in a current of steam at a temperature of 100° C. The juice is made alkaline with soda solution and finally sterelized in a current of steam. It is stated that bacteria grow on this medium without the production of toxic products and that cultures for use as vaccines may be obtained in periods of 2 to 24 hours. Tubercle bacilli and bacteria for use as vaccines in numerous specified diseases may be cultivated. The known use as culture medium of albumen preparations, slices of potato, carrots, apples and bananas, and the filtrate from boiled dried plums treated with agar agar, is referred to. A. Becker, Frankfort-on-Main, Germany. British Patent No. 313,514, filed Jan. 17, 1929.

Complex Metallic Compounds of Aromatic Oxy-Acids

Complex metallic compounds prepared by the interaction of a metallic oxide with an aromatic compound containing at least hydroxy groups and an acid substituent, are subjected to oxidation, whereby products having a different biological action are obtained. Hydrogen peroxide, magnesium peroxide and sodium persulfate are mentioned as oxidizing agents. Elementary oxygen may also be used. According to examples, potassium antimony pyrocatechin disulphonate is oxidized with hydrogen peroxide, potassium stannic or manganese pyrocatechin disulphonate in aqueous solution with air, potassium antimony pyrogolol disuphonate with hydrogen disulphonate with hydrogen peroxide, the normal-diethylamine salt of antimony protocatechuic acid (prepared by heating protocetchuic acid in normal diethylamin with antimony oxide) with hydrogen peroxide, and sodium tin protocatechuic acid in aqueous solution with air. Complex arsenic, cadmiu, iron, zinc, chromium, vanadium, copper, gold, calcium and lead compounds of oxy-acids can be oxidized in an analagous manner. I. G. Farbenindustrie A. G., Frank-fort-on-Main, Germany. British Patent No. 313,541, filed Feb. 14, 1928.

Amino Alcohols

Amino-alcohols are prepared by the catalytic hydrogenation of an oxy-carbonyl compound, a polyoxy-carbonyl compound, or a polycarbonyl compound, in the presence of ammonia or an amine. In the case of the oxy-and the polyoxy-carbonyl compounds, the carbonyl group alone reacts with the ammonia or amine, while with the polycarbonyl compounds only our carbonyl group so reacts, the remainder being simultaneously reduced to the alcohol stage. The products are useful therapeutically. The preparations of compounds from oxyacetone and cyclohexylamin, from acetylacetone and cyclohexylamin, from mannose and cyclohexylamin, from benzyl and methylamin, from acetylbenzoyl and methyl amine, from acetylacetone and aminoethanol, from aldol and anilin and from anisil and methylamin are described. In each case the materials are treated at room temperature with hydrogen under three atmospheres pressure in the presence of colloidal platinum. After the required amount of hydrogen has been absorbed, the platinum is precipitated by heating with hydrochloric acid, and the product extracted from the filtrate. A skita and F. Keil, Hanover, Germany. British Patent No. 313,617, filed June 14, 1929.

(Continued on page 67)

Less Physicians will Dispense

By S. DeWitt Clough*

Secretary, Abbott Laboratories

THE annual sick bill of our nation is two billion dollars. The average cost of illness to every man, woman and child in the United States is over twenty-three dollars a year. This is a conservative estimate. Some figure the average much higher.

Of the two billion dollars, seven hundred million dollars a year is spent in hospitals, while five hundred million dollars goes to physicians.

Seven hundred and fifty million dollars is spent in drugs alone. The annual business of 57,812 retail druggists is one billion, nine hundred and ninety-three million dollars. Of this amount, 28 per cent., or five hundred and fifty-eight million dollars is spent in drugs, chemicals, and prescriptions. This is a greater return than from any other department of a drug store. Soda and candy yield only 20 per cent., toilet goods 15 per cent., proprietaries 14 per cent., and cigars and tobacco 5 per cent.

Giving a wealth of statistics to show that opportunities in pharmaceuticals are still vast, Mr. Clough shows the drift in distribution of medicines as revealed by the physicians themselves.

A recent survey disclosed that only about 22,000,000 of our people in this country are in full vigor, 39,000,000 are in fair health, while 48,000,000 are physically imperfect. One-fortieth of our population is constantly ill to the extent of being bed-ridden. For each death per year, there are two persons sick throughout the year. It has been said that 50 per cent. of the American public is constipated and that this vast army of people consumes $50,000,000 worth of laxatives yearly.

These figures may explain why the drug business is one of the most stable industries in the world, and the least to be affected by any depression, actual or psychological. The data shows, also, that the possibilities for pharmaceutical business are still vast.

In March of 1928 a questionnaire was sent to 150,000 physicians. Among the questions were several on dispensing and prescribing. The doctors were asked: (1) Do you dispense ? (2) Do you prescribe ? (3) Do you both dispense and prescribe ?

Replies were received to these questions from 4,408 doctors; 686, or 15 per cent., stating that they dispense their own medicines; 1,680 doctors, or 37 per cent., stating that they prescribe, and 1,644 doctors, or 47 per cent., stating that they both prescribe and dispense. These figures show that 84 per cent. of the doctors are writing prescriptions, entirely or in part. An analysis showed that 1,931 of these replies were received from cities over 50,000 and 2,943 answers from cities under 50,000. Every state in the Union is represented. In my opinion, the class of doctors who dispense exclusively is decreasing, while the prescribing class is increasing. The foregoing figures are further confirmed by answers to the questions on direct buying of pharmaceuticals and buying through the trade. Only 12 per cent. of the doctors replying, stated that they were direct buyers, 58 per cent. said they ordered through the drug trade, and 29 per cent. replied that they ordered both direct and through the trade.

It is interesting to study some related figures which may explain why dispensing is on the decline. Starting with a total of 152,503 doctors, we find that 39,120, or 25.6 per cent. are located in 14 cities of 500,000 population or over; 26,567 doctors, or 17.4 per cent. are in 67 cities with population between 100,000 and

*Delivered before December semi-annual meeting A. P. M. A.

500,000; 10,382 doctors or 6.8 per cent. are in 87 cities with population between 50,000 and 100,000.

Thus we find that 76,169 doctors, or 49.8 per cent., of the medical profession are doing business in 168 cities of over 50,000 inhabitants. In these same cities are located 2,058 hospitals or 30.2 per cent., with a much larger percentage of actual beds.

Another survey shows that 12 counties in the United States, or four-tenths of one per cent. of the 3,068 counties in the United States, do 33 per cent. of the nation's business. These 12 counties have 28.9 per cent. of the total income, 26.6 per cent. of industrial wages, 22.5 per cent. of the drug stores, 17.2 per cent. of the population and 14 per cent. of the passenger automobiles.

Sixty-six counties, or 2 per cent. of the 3,068 counties in the United States, do 55 per cent. of the nation's business; 225 counties, or 7 per cent. of the total counties, do 75 per cent. of the business; and 632 counties, or 20 per cent., do 85 per cent. of the nation's business. This leaves 2,435 counties, or 80 per cent. of the total counties in the United States, doing only 15 per cent. of the nation's business.

Further figures from the U. S. Census of 1900 and 1920, and U. S. Census Estimates of 1925, show that in 1900, 40 per cent. of our population resided in cities, and 60 per cent. were in rural districts.

In 1920, 51 per cent. of the Nation's total inhabitants were urban and 49 per cent. rural, while in 1925 the estimate of urban population was 55 per cent. and rural, 45 per cent.

In 25 years the populations, rural and urban, have changed positions. In 1900 the city population was 30,000,000, while in 1925 it was 62,000,000. In 1920 the farm population was 45,000,000, while in 1925 it was 52,000,000. This shows an increase of 32,000,000 in the cities, and only 7,000,000 on the farm; 107 per cent. city increase, 16 per cent. farm increase.

Records of the last five years are even more startling. In 1920 the urban population was 54,000,000; to-day it is 62,000,000, an increase of 8,000,000. In 1920 the rural population was 51,000,000, to-day it is 52,000,000, an increase of only 1,000,000. In other words, during the last five years the city population has grown eight times as rapidly as that on the farm.

The old type of country doctor who dispensed his own medicines entirely is passing out of the picture. Hard roads have created new trading areas and buying centers. In these centers the clinics, the hospitals, the specialists and the new crop of general practitioners are concentrating. Changes in the requirements, education and registration of physicians is bringing about a new school of physicians. Economic conditions in various parts of the country are also responsible for changing habits of dispensing and prescribing. It is quite probable in my opinion that another five or ten years will bring about further marked changes in the buying habits of doctors, the status of pharmacy, and methods of distribution.

Whidden President of Bauer & Black

Ray A. Whidden was elected president of Bauer & Black, Inc., division of the Kendall Co., Chicago, to succeed A. Bauer, who becomes chairman of the board. H. L. Wells becomes vice-president and general manager, and C. K. Perkins vice-president in charge of marketing.

Mr. Whidden is very well known in the drug world. He was associated for many years with Eli Lilly & Co., of Indianapolis. Among his many activities in the drug trade is that of director of the American Pharmaceutical Association.

"These appointments culminate a year of reorganization and development following the merger with The Kendall Co., of Boston, stated Mr. Whidden and we can predict with confidence a steady and wholesome growth for 1930."

Dr. Arny Succeeds Dr. Rusby

A testimonial dinner was tendered to Dr. Henry H. Rusby by the Alumni Association of The College of Pharmacy of the City of New York at the Hotel Pennsylvania, December 11, 1929, and was attended by a host of his friends.

Announcement was made at that time of the resignation of Dr. Rusby as Dean of the College, to take effect on June 30 next. Dr. Rusby has deemed it prudent, in view of his approaching seventy-fifth birthday, to relinquish his Deanship.

Dr. Rusby's achievements have attracted wide attention both here and abroad. He has been awarded the honorary degree of Doctor of Science by Columbia University, and the Hanbury Medal by the Pharmaceutical Society of Great Britain. He has been named Dean Emeritus and will continue as professor of Botany and Materia Medica.

It was also announced at the dinner that Professor Henry V. Arny, Head of the Department of Chemistry had been named by the Trustees as Dr. Rusby's successor as Dean of the College.

Dr. Chen Joins Eli Lilly & Co.

Dr. J. J. Chen, the American educated Chinese who is responsible for the application of ephedrin in the medicine of the Western Hemisphere, was recently appointed director of pharmacologic research of the Lilly Research Laboratories.

Dr. Chen received his B. S. in pharmacy and Ph. D. in physiological chemistry from the University of Wisconsin, and his M. D. from Johns Hopkins Medical School. From 1923 to 1925 he was instructor of pharmacology at the Peking Union Medical College. In 1925 he was research pharmacologist in the late Professor A. S. Lovenhart's laboratory at the University of Wisconsin. Since 1927 he has been associate in the department of Professor John J. Abel at Johns Hopkins.

A. Ph. A. Elects Christensen

New officers of the American Pharmaceutical Association elected by mail ballot are: President, H. C. Christensen, Chicago; First Vice-President, Walter D. Adams, Forney, Tex.; Second Vice-President, D. B. R. Johnson, Norman, Okla.; Members of Council for three years, H. V. Arny, New York; T. J. Bradley, Boston; W. B. Day, Chicago.

These officers will be installed at the next annual meeting of the association to be held in Baltimore, May 5-10.

HARRISON

Narcotic Law

In the face of attempts to substitute new measures for the existing narcotic law, Colonel Nutt, in charge of narcotic enforcement comes to the support of the Harrison Act, again stressing the actual small number of addicts, and the complete control of domestic narcotics

By Colonel L. G. Nutt

IN FEBRUARY, 1909, an International Opium Commission, upon the invitation of the United States Government, met at Shanghai, China, where the opium problem was thoroughly examined and certain unanimous conclusions arrived at which in substance condemned the evils associated with the overproduction and use of opium and morphine, certain recommendations being made as to the measures to be taken by the nations represented to bring such evils to an end. As the International Commission was not empowered to negotiate a Convention binding the participating Powers, it was deemed necessary to recommend that an International Conference composed of delegates with full powers be convoked, not only to conventionalize the conclusions agreed upon by the Commission, but to provide rules under which opium and other narcotic drugs should be produced and the international traffic therein conducted, as well as national laws by which such drugs should be confined to strictly medicinal purposes in the territories of the different countries.

Accordingly, on the proposal of the United States, and on the invitation of the Netherlands' Government, the First International Opium Conference met at the Hague on December 1, 1911, and on January 23, 1912, the delegates thereto signed a Convention containing stipulations as to the production and the international and national traffic in opium, morphine and cocaine. As a result of subsequent conferences the Convention was finally put into effect, later being ratified by more than fifty Powers of the world which thereby committed themselves to the policy, expressed in the preamble of the Convention, to pursue progressive suppression of the abuses of opium, morphine, cocaine as well as drugs prepared or derived from these substances giving rise or which may give rise to analogous abuses.

The Convention was ratified by the President of the United States on October 27, 1913, the ratification being deposited with the Netherlands' Government on December 10, 1913. To carry out the obligations of the United States under the Convention, three statutes were thereafter enacted of which perhaps the most important was the act of December 17, 1914, commonly known as the Harrison Narcotic Law.

The Harrison Law, as amended, imposes certain occupational taxes upon all persons, firms and corporations importing, manufacturing, selling, dispensing or prescribing narcotic drugs. A commodity tax is also imposed upon such drugs. The effect of its enforcement as a revenue law is to limit the sale and use of narcotics to the sale or use only for medical purposes. Section 2 of the Act is particularly applicable to physicians and other practitioners, as it

requires every sale or dispensing of narcotics to be made pursuant to an official order form, with certain exceptions of which the most important are in favor of the physician or other practitioner who either sells or dispenses the drug directly to a patient or who prescribes the drug for such patient, in the course of professional practice only, and the druggist who accepts and fills such a prescription. For such a sale or dispensing, no official order form is required.

After the Harrison Law became effective, there was some doubt as to the extent to which the Act forbade the prescribing and dispensing of narcotics, and some physicians were not very clear as to the meaning of the phrase "in the course of professional practice only" as applied to the case of an addict under treatment by a physician. Of course, the great majority of the profession, being reputable practitioners, had no doubt as to the impropriety of prescribing wholesale quantities for an addict whose only desire for the drug was based upon its use to gratify mere addiction or to peddle to others, but there were regrettably a number of practitioners who were willing to accommodate this type of consumer for financial gain. Enforcement officers therefore proceeded against this latter class of practitioners and a number of them were convicted of violations of Section 2 of the Act, among them being one C. T. Doremus, a physician of Texas, whose case was the first one to reach the Supreme Court under Section 2. Doctor Doremus attacked the constitutionality of the Act. The indictment against him was in ten counts, a sample of which charged him with the unlawful sale of 500 1/6-grain tablets of heroin to an addict. The Supreme Court upheld the constitutionality of the Act. On the same day, March 2, 1919, the Supreme Court rendered an opinion in another case arising under Section 2, that of Webb and Goldbaum vs. United States. Dr. Webb, over a period of some eleven months, had issued some four thousand prescriptions at 50c each for narcotics for an addict, these prescriptions calling for as high as one dram of morphine in some cases, which were filled for the addicts by Goldbaum, the druggist. The question was squarely presented to the court as follows:

> "If a practicing and registered physician issues an order for morphine to an habitual user thereof, the order not being issued by him in the course of professional treatment in the attempted cure of the habit, but being issued for the purpose of providing the user with morphine sufficient to keep him comfortable by maintaining his customary use, is such order a physicians' prescription under Exception (b) of Sec. 2 ?"

To this question, the Supreme Court replied as follows:

> "* * * To call such an order for the use of morphine a physician's prescription would be so plain a perversion of meaning that no discussion of the subject is required. That question should be answered in the negative."

An important point was thus made clear, but there continued and still continue to be a number of practitioners who were and are willing to run the risk of prosecution on account of the clearly improper sale and use of narcotics. As examples of the more flagrant cases it is pertinent to mention briefly a few decisions of the Supreme Court condemning specific instances of unlawful prescribing. On June 5, 1916, the Court affirmed the judgment of conviction of one Jin Fuey Moy, a Chinese physician of Pittsburgh, whose offenses included the issuance of prescriptions for large quantities—eight to sixteen drams at a time—of narcotic drugs for addicts, the charge for such prescriptions being at the rate of $1.00 per dram. On March 27, 1922, the Court upheld the validity of an indictment against Dr. Morris Behrman of New York, who had issued, amongst others, three prescriptions calling for 150 grains of heroin, 360 grains of morphine, and 210 grains of cocaine, respectively, for an addict. On April 19, 1926, the Court upheld the conviction of Dr. A. W. Boyd, of Tennessee, the conviction being had on six of thirteen counts of an indictment charging the unlawful sale by prescription to addicts of from 30 to 48 grains at a time.

There have been and continue to be cases against other practitioners of violation of Section 2 of the Act in similar or lesser degree, but there is no ground for apprehension on the part of any physician who is practicing his profession in good faith and in accordance with medical standards. During the fiscal year 1922, by which time interpretation of the physician's duty under Section 2 had become fairly well settled, there were tried in the Federal courts under that section 192 registered practitioners, of whom the majority were physicians, and of this number 199 were convicted and 33 acquitted. During the fiscal year 1929, 158 registered practitioners were tried under the same section, 149 being convicted and 9 acquitted. These practitioners were thus proceeded against because the investigating officers were convinced that the facts disclosed lack of good faith and the desire to commercialize the profession. No case was brought to trial where there was a reasonable doubt as to the physician's good faith or as to his adherence to medical standards. The practitioner is always given the advantage of any reasonable doubt. It is the desire of the field officers, many of whom are themselves qualified physicians and pharmacists, to be of assistance to the profession in an advisory capacity, and in return, they solicit the co-operation of the profession, not only by individuals, but collectively as State medical boards and state, county and city medical societies.

In this connection, it may not be inappropriate to invite especial attention to the test of proper prescribing and dispensing provided in the Act itself, i. e., as embodied in the phrase "in the course of professional practice only." The courts have avoided any attempt at a judicial definition of "professional practice" as it is obviously impossible to give a definition in general terms of a subject covering the entire field of the proper treatment of human ills in the expectation that such definition can be applied to the infinitely varying circumstances surrounding individual cases to determine accurately which of those cases require the administration of narcotic drugs. Furthermore, with the advancement of science, that administration of narcotics in a given case which is in accord with professional practice to-day may not, conceivably, be in accord with professional practice next year. The fact that it is impossible to give a definition of the term that will serve as an infallible guide in any case, however, does not signify that a problem difficult of solution is imposed upon the individual practicing physician. By reason of his education, training and experience, he is or should be very well qualified to determine whether, if at all or to what extent, narcotics should be dispensed in a given case, that is to say, whether under the best medical standards the administration of narcotics to the particular patient is indicated. If the enforcement officers discover evidence that convinces them and the United States Attorney that a physician has flagrantly overstepped the bounds of professional practice it is their duty to bring him to trial, provided an indictment is returned, and the effect of these proceedings, under the statutory standard of professional practice, is that he is being tried by the medical profession for if the government cannot show to the jury that the actions of the physician were not in the course of professional practice, he must be acquitted. That the officers are careful to avoid, if possible, the presentation for prosecution of doubtful cases is apparent from a consideration of the record for the fiscal year 1929, when only 9 registered persons out of 158 tried were acquitted.

Majority Not Physicians

It must not be understood, from the foregoing discussion, that the majority of violators of the Harrison Law are members of the medical profession. It is very satisfactory to note that during the fiscal year 1929, only 158 registered persons were found to be so flagrantly exceeding what was believed to be the bounds of professional practice as to justify prosecution, particularly when it is realized that on June 30, 1929, there were registered under the law a total of 146,588 physicians and other practitioners, and 51,568 retail dealers (pharmacists). Under the system or records and reports of sales and transfers, and the present organization of the comparatively small but efficient field force, it is believed that no case of flagrantly improper prescribing and selling of narcotic drugs can long continue without coming to the attention of a Federal narcotic officer, and consequently, to the attention of the prosecuting attorney. Hence the ratio of registered persons tried to the total number of persons registered may be taken as a fair index of the degree of narcotic law observance on the part of the medical and pharmaceutical professions.

Number of Addicts

It would not be proper to end this statement without a brief mention of the principal narcotic law enforcement problem, which is the detection and prevention of illicit importation of narcotics from abroad. This office has estimated, after a survey by its field force, that there are not more than 100,000 drug addicts in the United States. While it is impossible, owing to the very nature of drug addiction, to obtain more than an estimate of the number of drug addicts, this office is nevertheless firmly convinced that there was a much greater number of drug addicts in the United States at the time the Harrison Law went into effect and that the reduction has been directly due to enforcement of this law. Alarmists can and do make extravagant claims contrary to this opinion, but can adduce no credible evidence in support of their claims. However, the present number of addicts form a market for narcotics which is supplied principally by the smuggler. The ingenuity and resourcefulness of the latter is truly marvelous but that he and his distributing organization are feeling the effects of narcotic law enforcement is indicated by the steadily mounting prices of these drugs in the illicit market due to difficulty in obtaining supplies. During the fiscal year 1929 the total number of cases tried under narcotic laws was 5,317, of which 5,193 or 97.6% were convicted. It is believed that this is a record of which the Federal narcotic field force may justifiably be proud, representing as it does the result of the investigative duties of less than 300 field officers, under an appropriation of less than $1,500,000.

Frank J. McDonough, president of New York Quinine & Chemical Works was host at lunch to Charles C. Concannon, Chief of the Chemical Division, Bureau of Foreign & Domestic Commerce, upon the occasion of the holding of the second monthly "Chemical Day" held by Mr. Concannon in New York. Other guests present at the luncheon were: Ralph Dorland, The Dow Chemical Co.; James J. Kerrigan, Merck & Co.; F. Hailar, United Drug Co.; J. H. Fitzsimmons, Orbis Products Trading Co.; R. W. de Greeff, R. W. Greff & Co.; Bradley Nash, National City Bank; J. Conklin, U. S. Fidelity & Guarantee Co.; R. P. Hendron, New York office, Department of Commerce.

John I. Tierney, secretary of the Manufacturing Chemists' Association, died at Emergency Hospital, Washington, D. C., Dec. 23, 1929. Mr. Tierney, who was fifty-four years old, was secretary of the association since June 1919.

{ *Chicago Happenings* }

Chicago Perfumery, Soap & Extract Association's first meeting of the new year was held at the Midland Club on Wednesday, January 8th. An unusually large crowd was present to welcome Clarence A. Seguin, the new President, who occupied the chair for the first time. Mr. Seguin announced the appointment of the following committees: Executive, the officers (C. A. Seguin, Chris Christensen, and Wm. H. Schutte) and A. G. Schneider, of Victor Chemical Works; and Harold E. Lancaster, of Marshall Field & Co.; Entertainment, Frank H. Pettee, Chairman, Euclid Snow, of Mallinckrodt Chemical Works; Dudley F. Lum, of Givaudau-Delawanna, Inc.; F. S. Dedrick, of James S. Kirk & Co.; J. W. Bicks, of Carr-Lowery Glass Co.; and Frederick J. Lueders, of George Lueders & Co.; Legislative, Thomas J. Hickey, Chairman; Wm. H. Mutters, of Armstrong Cork Co.; H. D. Crooks, of John Blocki, Inc.; and Louis J. Freundt, of American Can Co.; Membership, Donald M. Clark, Chairman, of Franco American Hygienic Co.; H. G. MacKay, of E. N. Rowell & Co.; L. A. Solo, of Primrose Laboratories; and Arthur Fortune, of van Ameringen-Haebler, Inc.; Bowling, Paul Pettit, Chairman, of Lady Grey Co.; A. M. Burgh, of Marcelle Laboratories; Adolph M. Leue, of Acem Compact Puff Co.; and R. H. McBrady, of J. E. McBrady & Co.; Publicity, Clarence Morgan, Chairman, of Clarence Morgan & Co.; H. C. Renner, of Monsanto Chemical Works; and H. H. Sommers, of Chicago Cork Works. Mr. Pettee is planning a series of entertaining programs for the forthcoming meetings and the Association is preparing to expand its activities generally. William H. Schutte, the new Secretary, aims to enlist the efforts of a number who have not been active in the past.

Chicago Drug & Chemical Association held its annual banquet, limited this year to members only, at the North Ballroom of the Stevens Hotel on the evening of Tuesday, December 19th. It was estimated that all but about two dozen of the more than two hundred members were present. The entertainment was of the most lavish and colorful order and extended well into the small hours. The seating arrangement was admirably handled by E. L. Drach, and the souvenir bags, which were distributed at the close of the affair, were regarded as precious, though exceedingly weighty burdens. The table decorations were tastefully executed by O. M. Krembs and E. P. Gibney. Others who served with commendable thoroughness and foresight were Wm. O'Neill, who handled the ticket distribution and collection, and Leo Lanigan, who supervised the serving of the guests. The affair as a whole was a credit to the Banquet Committee, which consisted of R. A. Whidden, Chairman, Wm. O'Neill, Vice-chairman, Joseph A. Gauer, Secretary, C. Christensen, Charles Curtis, E. L. Drach, Wm. B. Erb, E. P. Gibney, Harold D. Hopp, O. M. Krembs, H. E. Lancaster, L. A. Lanigan, Euclid Snow, and B. F. Zimmer.

Hereafter, at all meetings of the Chicago Drug & Chemical Association, the members will all wear badges bearing their own names and the names of the companies they represent. A similar practise has long been followed by Rotarians and O. N. Davis, President, has sought, by the innovation, to promote his progressive ideals of good fellowship.

Joseph De Lorms, head of Riviera Products Co., announces that company's immediate removal to more commodious quarters at 5 West Austin ave. New facilities have been installed, in accordance with Mr. De Lorme's plans for a general expansion of his business.

Pepsodent Co., is now handsomely installed in the new Colgate-Palmolive-Peet Building, where they have engaged two entire floors for extensive offices and stock rooms.

Mead, Johnson Adopts "Viosterol"

A. L. Rose, formerly in charge of professional journal advertising for E. R. Squibb & Sons, is now advertising manager of Mead, Johnson & Co., Evansville, Ind.

Mr. Rose has called attention to the present status of the irradiated ergosterol manufactured by Mead, Johnson, stating that "as servants of the American medical profession, Mead, Johnson & Co., defers to its wishes and now call our product Mead's Viosterol in Oil, 100 D." This product was formerly called "Acterol," a name coined by Mead, Johnson.

Mallinckrodt Men Long In Service

One hundred and fifty-six representatives and department heads with a total of 2,740 years service with Mallinckrodt Chemical Works—an average of 17½ years per man—attended the annual sales convention of the company in St. Louis, Dec. 12-14. The greatest number of years of service among the group was 61 years, while eight men had records of 40 or more years.

The convention ended on the final night with a banquet at Missouri Athletic Club, at which time addresses were made by the president, O. L. Biebinger, and Edward Mallinckrodt, Jr.

Insulin for Internal Use

If the experiments now carried on in a number of German clinics prove as successful as claimed, a new form of insulin for internal use, called "Perorales Insulin" will be soon placed on the market. This product has been invented by the "Pharmaceutisches Institut Ludwig Wilhelm Gans A. G." of Oberursel, Near Frankfort on the Main. It is protected by German and foreign patents, according to the office of the consul general, Frankfort-on-the-Main.

Internal insulin is prepared from insulin which answers the requirements of the German Insulin Committee and made under the control of that body.

Merrell Spurs Sales Plans

Thurston Merrell, vice president and director of sales, and O. J. Niederhofer, sales manager, of The Wm. S. Merrell Co. have returned to Cincinnati after conducting a series of district sales meetings, where extensive plans were outlined to the Merrell representatives for 1930.

The new plans will include a more intensive program of detail work with physicians and dentists, medical and dental advertising campaigns, and the development of more sales and advertising helps on Merrell's daily health needs line for the retail druggists.

During the month meetings were also held in Syracuse, Chicago, and Kansas City. The balance of the territorial meetings will be called during the month of January, which will then complete all sections of the United States.

Iodent Chemical Co. plant at Detroit was completely destroyed by fire on December 12. Temporary quarters have been leased and production is now under way and it is expected that jobbers and dealers throughout the world will receive supplies of iodent tooth paste without delay.

Directors have met and authorized a new plant which will be the finest and most modernly equipped one in the tooth paste business.

Julius Stursberger, director of E. R. Squibb & Sons, died Dec. 23, 1929 at his home in New York. Mr. Stursberger was 57 years old, and widely interested in financial and production enterprises.

The McKesson Citation

Formation of the present McKesson and Robbins organization is said by the Federal Trade Commission to have violated the Clayton Act. Mr. Coster says the Department of Justice approved the action taken.

STRANGE as it may seem to those in the drug trade, McKesson & Robbins, Inc., of Maryland, has been cited by the Federal Trade Commission which has issued a complaint against the firm in which the Commission charges violations of the Clayton Act. The complaint states that McKesson & Robbins, Inc., have acquired and now own all or the majority of the capital stocks of thirty drug companies scattered throughout the country in violation of Section 7 of the Clayton Act which prohibits combines that restrain competition.

The Commission states that the effect of the acquisition of the stocks of these companies may be to:

"Substantially lessen competition between such corporations or between some of them.

"Restrain commerce in drugs, proprietary medicines and other articles usual to the drug business in the several sections or communities, or in some of the sections or communities in which such corporations are engaged in commerce.

"Tend to create in McKesson & Robbins, Inc., a monopoly of drugs, proprietary medicines and other articles usual to the drug business."

Other charges in the complaint were that the use by McKesson & Robbins of the stocks of these corporations by voting or granting of proxies or otherwise might be and is too substantially lessen competition between such corporations or between some of them.

States the complaint:

"Since its organization, said respondent has acquired and still owns all or the majority of the issued and outstanding capital stocks of each of the following named corporations, all of which said corporations were, at the time their stocks were acquired, engaged at the places hereinafter mentioned in the business of selling at wholesale drugs, proprietary medicines and other articles usual to the wholesale drug business, between and among the various States and territories of the United States and the District of Columbia each in competition with the others, causing said drugs, proprietary medicines and other articles usual to the drug business, when sold, to be transported to the purchasers thereof located throughout the various States of the United States other than those in which the said products are sold:

"Bedsole Colvin Drug Co., an Alabama corporation; Churchill Co., an Iowa corporation; Eastern Drug Co., a Massachusetts corporation; Farrand, Williams & Clark, a Michigan corporation; Faxon & Gallagher Drug Co., a Missouri corporation; Fuller-Morrison Co., an Illinois corporation; Gibson-Snow Co., Inc., a New York corporation with its principal place of business in Albany and branches at Troy, Syracuse, Rochester and Buffalo; the Creever-Stewart Drug Co., a Florida corporation; the Hull-Van Gorder Co., an Ohio corporation; Kirk-Geary & Co., Inc., and Langley & Michaels Co., both California corporations; Minneapolis Drug Co., a Minnesota corporation; Murray Drug Co., a South Carolina corporation; Roeber-Kuebler Co., a New Jersey corporation; Southern Drug Co., a Texas corporation; Western Wholesale Drug Co., Inc., a California corporation; Alfred Vogeler Drug Co., an Ohio corporation; J. W. Crowdus Drug Co., a Texas corporation; Hornick, More & Porterfield, an Iowa corporation; Huntington Drug Co., a West Virginia corporation; C. J. Lincoln Co., an Arkansas corporation; Ogden Wholesale Drug Co., a Utah corporation; Parker, Blake Co., Ltd., a Louisiana corporation; Peter-Neat-Richardson Co., a Kentucky corporation; J. B. Riley Drug Co., a Georgia corporation; Roanoke Drug Co., a Virginia corporation; Spokane Drug Co., a Washington corporation, and Spurlock-Neal Co., a Tennessee corporation."

F. Donald Coster, president of McKesson & Robbins, Inc., lost little time in making a convincing statement regarding the complaint.

Said Mr. Coster:

"McKesson & Robbins, Inc., brought under a single ownership a group of long established wholesale drug houses in different parts of the country

and a manufacturer producing well-known lines of drug products.

"Before the plan was put into effect, a statement of the fact was submitted to the Department of Justice at Washington and the company was advised that the department saw no objection to the acquisitions now questioned in the complaint of the Federal Trade Commission.

"Any overlapping of territory between the different wholesale houses acquired was incidental, and the effect of the McKesson & Robbins acquisitions has been to continue and increase competition in the wholesale drug field.

"The organization has made possible a comprehensive service to independent drug retailers and has been enthusiastically indorsed by retailers the country over. We are confident that the facts to be shown in any investigation by the Federal Trade Commission will result in a dismissal of the complaint."

There is no doubt in the minds of those connected with the drug trade that the McKesson & Robbins combination has increased the sharpness of competition within the wholesale drug trade. Discounts to retailers have been increased as a result of their formation and now the independent retailer is buying his supplies at lower prices whether he buys from McKesson & Robbins or not. It has been stated by people who are in a position to know that sixty of the remaining members of the National Wholesale Druggists' Association have a buying or distributing power equal to McKesson & Robbins. Considering that there are still more in the field than sixty remaining members of the N. W. D. A.; all the members of the Federal Wholesale Druggists' Association; and many other wholesale druggists, it is certain that McKesson & Robbins has not complete control of the field of drug wholesaling by any means.

During the week that the complaint was issued, McKesson & Robbins announced final acquisition of three houses that have long been expected to be taken over. These houses are the Duff Drug Company, Chattanooga, Tenn.; Berry, Demoville & Company, Nashville, Tenn.; and Charles W. Whittlesey Company, New Haven, Conn.

There seems to be no reference in the complaint to any contracts that McKesson & Robbins may have with the eighteen thousand retailers throughout the country who are taking advantage of the McKesson Service. Since these retailers are still independent and are buying from McKesson & Robbins because they believe it is to their advantage to do so, it is not believed that this phase of the question will furnish any basis for complaint. The complaint is evidently confined to those points which the Commission believe are prohibited by the Clayton Act, and which the Commission believes McKesson & Robbins have violated.

Proprietary Ass'n Will Meet in Canada

Windsor Hotel, Montreal, Canada, has been selected as the place of meeting for the Proprietary Association's annual convention. The meeting will start on Tuesday, May 20, and will continue for three days which is one day longer than is customary for Proprietary Association conventions.

The banquet is expected to occur on the second evening, Wednesday, May 21. Entertainment features have been provided for the ladies to whom a special invitation has been issued.

An invitation has been extended to the Proprietary Association of Canada to meet jointly with the American Association.

Kolynos Wins British Suit

The Chancery Division, London, Justice Clauson, dismissed the action of Huntoon Co., Inc., under the law of Rhode Island, against Kolynos, Inc. The plaintiffs asked for an injuction to restrain the defendants from breaking the terms of a license of letters patent granted to them in August, 1923.

Plaintiffs stated they were the owners of the patent rights in a collapsible tube for containing tooth paste which had a closure cap attached to the tube by a wire loop called a spring form. Defendants had agreed to purchase from the spring form to the extent of 20,000 gross per annum, it is reported, and had been purchasing from another company a slightly modified form of tube and cap.

Merck & Co., Inc. will move their New York office from Front st. to the Butterick Building, 161 Sixth ave., corner of Spring st., New York City, some time during February. The ground floor and mezzanine will be used for stock and shipping, and the second floor for offices. The location is convenient to the Holland vehicular tunnels and rapid transit lines. The property at 145 Front st., which Merck & Co., Inc. has used as their New York City offices since the consolidation with the Powers-Weightman-Rosengarten Co., has been sold.

C. Mahlon Kline, president Smith, Kline & French Co., Philadelphia, sustained a broken right arm, a broken left leg and severe bruises as a result of an accident in landing a passenger plane of the T. A. T. lines at Indianapolis.

George A. Currens, Detroit, father of Turner F. Currens, manager of New York division of the Norwich Pharmacal Co., Norwich, N. Y. died here recently at the age of 76, after a long illness. A widow and two sons survive.

Vadsco Sales Corp., successors to V. Vivaudou, Inc., have moved their executive and sales offices from 233 Spring st., to 580 Fifth ave., at Forty-seventh st. Manufacturing operations are being carried on at 227 Borden ave., Long Island City, N. Y.

Business of the late G. A. Steffens, Antwerp, Belgium, is now being conducted under the name of Societe Anversuise de Produits Chimiques, Societe Anonyme, formed by F. Blaut, A. Boels, and A. Bresseleers, former associates of Mr. Steffens.

Edward N. Rowell, president of E. N. Rowell Co., paper box manufacturers, Batavia, N. Y., died Dec. 21, 1929, at Clifton Springs Sanitarium. Mr. Rowell was eighty-two years old.

W. F. Stumfig, member of sales department of Dow Chemical Co., Midland, has been appointed advertising manager of that firm succeeding Leland I. Doan who is now sales manager.

Announcing a New Standard of Quality

AMER SOL

"GOLD SHIELD"

AMER SOL is now offering an Alcohol of superlative quality for Pharmaceuticals, Perfumes and other selected uses.

This special grade will be sold only under the AMER-SOL "Gold Shield" Label, which will be attached to packages containing this material.

THIS GRADE is not offered for general industrial consumption. It is a special product made to meet the increasing demand from those trades requiring the utmost in quality because of its greater chemical purity . . . or to insure perfect stability in delicately-balanced formulas.

Permit us to demonstrate the unusual characteristics of this product before selecting your source of supply for 1930. . . . If desired, our technical department will collaborate by furnishing the necessary data for making comparative chemical analysis.

AMERICAN SOLVENTS & CHEMICAL CORPORATION

Executive Offices: 122 East 42nd Street, Chanin Building, New York, N. Y.

Plants: Everett, Mass.; Harvey, La.; New Orleans, La.; Agnew, Cal.; Albany, N. Y.; Chicago, Ill.

SALES OFFICES AND WAREHOUSES ALL OVER THE COUNTRY

Sealing Oils

A new inexpensive, easily applied seal for cod liver and other oils is now used by E. R. Squibb & Sons who have particular difficulty with their cod liver oil due to the fact that it carbonated.

PROPER sealing of bottles with metal caps still continues as a problem with many drug trade manufacturers who are periodically making changes in either the type of cap used or the method of application. The type of liner has also come in for considerable thought and experiment since it is realized that the liner is the thing that makes the actual seal and must stand up over a long period.

The question of sealing oils has been particularly trying for some manufacturers. This is due to the fact that oils might properly be considered as dry substances that do not have a swelling effect upon the cork such as aqueous substances do. In the case of aqueous substances, the cork liner is kept in a moist condition and this causes it to swell and have resilience. But when oily substances are similarly sealed the cork liner remains in a dry state that is not conducive to effective sealing.

When cod liver oil is carbonated and sealed under pressure, such as has been the practice with E. R. Squibb & Sons for the past five years, the difficulty in effective sealing is increased still further. Here is a case of sealing similar to the sealing of a carbonated beverage. But in the case of the carbonated beverage, effective sealing is possible due to the aqueous condition of the beverage.

Some time ago, Squibb attempted to overcome this difficulty by inserting in the cap a cork liner of more than ordinary thickness. This called for a cap that was deeper than the accepted standard. The method that Squibb used to apply this cap was interesting since at the moment of tightening, enormous pressure was applied directly on the top of the cap. This was done in an effort to prevent the cap from jarring loose, and also to be certain that the cork liner was properly seated all around the sealing rim of the bottle.

An executive in charge of production at the Squibb laboratories states that since bottles closed with caps are relatively cheap containers, slight imperfections are bound to occur. He stated that the top rim of a bottle might occasionally have a ridge across it particularly at the point where the molten glass flows together when the bottle is made. This ridge, stated this executive, is not always visible to the eye of the inspector and takes quite accurate testing to detect. But, nevertheless, when these bottles are capped containing oil, seepage will occur over a long period, and in the case of cod liver oil in particular this is decidedly objectionable.

Other slight imperfections such as the threads being imperfect, or the threaded neck of the bottle being not exactly at right angles to the body of the bottle causing the neck to taper often cause leakage to develop. While it is possible to examine these bottles with a microscope and reject them before they are filled, such an inspection would take so much time that it would make the actual cost of the bottles prohibitive for ordinary use.

A bottle of Squibb's Cod Liver Oil showing the transparent seal with the screw cap removed.

Another limitation of the metal cap, states the Squibb executive, is the fact that it is not a breakable seal such as was the case when corks were used. The corks used by this company were always sealed in such a manner that the package could not be opened without this fact being immediately visible to anyone picking up the package. With the metal cap, this has not been the rule.

In a final effort to overcome these deficiencies of metal caps for packing oils in particular, Squibb is now using an improved seal which in fact represents a double seal. To all outward appearances the packages are closed exactly as before. That is, the second seal is not visible until the metal cap is removed. The ordinary continuous thread screw cap is used exactly as before and the bottles are no different.

The seal that is now in use at Squibb's on cod liver oil, mineral oil, and olive oil, is applied over the sealing surface of the bottle underneath the cap. It consists of a circular sheet of an impervious, inert, transparent material that is fastened to the top rim of the bottle. The screw cap can be taken off and put on again without disturbing this seal. This seal assures the consumer that the product hasnot been tampered with.

The fact that this seal might be considered an ultimate seal in that it is firmly fastened to the top of the bottle and must be broken or torn to release the contents, makes all the previous efforts of Squibb to close up all the small crevices quite superfluous.

The application of the seal is extremely simple and adds only one easy operation which is placed in the travel of the bottle from the filling machine to the capping machine. The apparatus for this additional operation is quite simple and very inexpensive. Furthermore, the seals themselves are quite inexpensive costing only a few cents per thousand.

The seal in question is manufactured by Ferdinand Gutmann & Co. and is protected by patent applications.

John D. Gillis Moves to London

John D. Gillis, assistant to the president of Monsanto Chemical Works, St. Louis, and formerly president of John T. Milliken & Co., has been promoted to a position by Monsanto that will require his residence to be in London, England. The position is that of an executive of Graesser-Monsanto Chemical Works, Ltd., London, the English subsidiary of Monsanto Chemical Works.

Mr. Gillis' present residence is at 6,926 Delmar Road, University City. He has been prominent socially and in club circles in St. Louis and has a wide acquaintance throughout the drug and chemical trades. He sailed for England on Jan. 11, aboard the Olympic. Mrs. Gillis and their two sons, John and James, will join him in June after John, Jr. graduates from Washington University.

Samuel W. Allender succeeds Mr. Gillis as assistant to the president of Monsanto Chemical Works.

Pharmaceuticals in El Salvador

Some idea of the value of imports of pharmaceutical articles into El Salvador during the past two years may be gained from the following table furnished by Consul A. F. Carleton, San Salvador.

Country of Origin	*1927*	*1928*
United States	$272,089	$263,255
Germany	81,281	53,238
Great Britain	115,417	40,474
France	103,701	106,058
Other countries	19,147	58,902
	$591,635	$521,927

Druggists are prohibited by law from making recommendations regarding products to customers. The market absorbs the following preparations in order of importance; laxatives, purgatives, tonics, blood purifiers, and liniments. Small inexpensive sizes in medicines sell better since the purchasing power of the people is small.

All quotations from American firms are made in United States currency. As a general rule, drug stores and to a lesser extent the doctors buy direct, some of the drug stores acting as wholesale distributing houses. Both banks and wholesale houses act as collecting agents. Terms range from cash with order to six months credit, but the usual terms are sight drafts or cash against documents. The cost of transportation of medicine from any of the ports in El Salvador to San Salvador is 91c per 100 pounds.

Argentine Medicinal Market

In Argentina, with over ten million people, about one-fifth of whom are city dwellers, there is obviously a large demand for medicinals and toilet preparations, says Vice Consul S. Walter Washington, of Buenos Aires. The demand for perfumes is great, while that for shampoos is fair. The demand for liquid soaps is growing, but at present they are used only in limited amounts.

Chemical and pharmaceutical products comprise about four per cent. of Argentine importations. According to an official Argentine Government bulletin, nearly 40 per cent. of the chemical products consumed in the country are manufactured locally, by 567 establishments with a capital of $38,000,000 Argentine paper.

The most important domestic production is in the line of soaps. The largest importations of common soap have always come from England, but several British soap manufacturers have recently established branch factories in Argentina and started to make their own soap. About two-thirds of the imports of perfumed soaps originate in Spain. The United States appears to have been second in the list during recent years, having sent about 12 per cent. of the imported perfumed soaps.

The Norwich Pharmacal Co., Norwich, N. Y., has appointed Young & Rubicam, Inc., N. Y. advertising agency, to direct the advertising of its Pepto-Bismol and Amolin. Kelly, Spline and Watkins, Inc., also of N. Y., has been appointed to direct the advertising of Unguentine Rectal Cones and Antoinette Donnelly Specialties.

The Canadian advertising of the Norwich company will be handled by Bowman, Hoge, Ltd., Toronto advertising agency.

The McKesson-Hall VanGorder Co. will establish a large distributing plant in Akron for the distribution of their products. The old Burkhardt brewery at 513 Grant st., Akron, has been leased and will be the first branch outside of Cleveland.

Sheik Toilet Products Co., Chicago, has filed an involuntary petition in bankruptcy, with World Best Hair Tonic Co. among the creditors.

Crude Drug Use Increases

The extensive use of crude botanical drugs in the preparation of various pharmaceuticals and proprietary medicines, insecticides, and flavoring is evidenced in the imports of such products as pyrethrum flowers, licorice root, and others of this group which amounted to $8,017,000 in the first 10 months of 1929, according to an oral statement Dec. 27 by F. A. Delgado of the chemical division of the Department of Commerce.

Although the imports of these products in 1929 have declined by about 8 per cent. from last year there is no indication of a reduced consumption in the United States, the change in imports being due rather to heavy purchases one year and consequent small buying the next, and also to the availability of these commodities and price fluctuations, it was stated.

The imports of pyrethrum, originating chiefly from Japan and Yugoslavia, amounted to $1,529,000 in the 1929 10-month period. This product, which is shipped in the form of whole or broken dried flowers, is used for the manufacture of insect powders and other insecticide preparations, it was explained.

The use of licorice in flavoring tobacco products accounts for the bulk of licorice root imports, which amounted to $1,552,000 in the first 10 months of the year. The product is used to some extent also in confectionery and medicines and is purchased principally in Turkey, Asia Minor, Spain, and Italy, according to the division. The United States tobacco industry consumed approximately 33,000,000 pounds of licorice extract in 1928, the tobacco section of the Department stated.

Cinchona bark, one of the most important and best known crude drug imports, was brought into the United States to the amount of $397,000 in the 10-month period. From this material, quinine is extracted, and it is also used in other pharmaceuticals and proprietary medicines, such as tincture of cinchona. Most of the imports come from Java and Madura, it was stated.

Imports of senna, a drug used for medicinal purposes, amounted to $105,000 in the first 10 months of the year. This product, originating from Egypt and India, comes in whole or broken leaves and is one of the most popular mild laxatives used in the United States. It is sold in leaf form and also enters into countless medicinal preparations, it was stated.

Other products of this group, amounting to $3,458,000 in the 10-month period, include buchu, a plant leaf which comes from South Africa and is used as a diuretic for internal treatment of kidney and bladder ailments; ergot, an internal dilator and contractor, which originates as a fungus on the rye plant and is shipped here from Russia, Spain and Portugal; aloes, a cathartic used in laxative pills, which is a gum exudation from a tree found principally in the Dutch West Indies; ephedra vulgaris, a drug which has come into prominence in the last few years, although known for thousands of years in China, and is a principal ingredient in a number of pharmaceutical preparations for diseases associated with the respiratory organs; nux vomica, one of the oldest and best known botanical drugs, which contains alkaloid strychnine, is used as a stimulant, and originates in India in the form of a seed, the division stated.

The increased consumption of health foods is reflected in the recent imports of psyllium seed, a laxative element used in connection with health breads, etc. Italy, France, Spain, Greece and North Africa are the principal sources of supply, according to the division.

Another "old reliable" and popular crude drug, which is used in the treatment of heart and kidney infections, is digitalis, the dried leaves of the foxglove flower. It is important principally from England.

From southern and central Europe, Asia Minor and Algeria comes the drug belladonna, a plant containing atropine and used as a sedative and diuretic and in the treatment of the eyes, according to the division.

Mexican Proprietary Market

In common with most other Latin American countries, Mexico offers a favorable market for practically all kinds of proprietary remedies, cough syrups, and pastilles, most of which are obtained from foreign manufacturers, states Consul General William Dawson, of Mexico City.

Many foreign exporters send their products in bulk to Mexico where they are packed and labeled by a representative of the manufacturer. The reason for this is that the Mexican tariff on articles such as proprietary medicines is based on the weight of the article itself plus the weight of the immediate container. It sometimes proves advantageous to have cartons or containers made in Mexico.

In general, American medicinals are well known and liked in Mexico, as is evidenced by the predominant position of the United States in the import trade. Contiguity and the recognized high quality of American products are among the factors contributing to this situation and tend to overcome the more favorable prices and credit terms which are at times offered by European manufacturers.

New Monsanto Directors

Philip Stockton and Commander Charles Belknap, two prominent Boston men, were added to the board of Monsanto Chemical Works at the December meeting of directors. The board was increased from nine to eleven members.

Stockton is president of the First National Bank of Boston, and, in addition, is a member of the boards of American Telephone and Telegraph Co., General Electric, Gillette Safety Razor, International Acceptance Bank, New England Mutual Life Insurance Co. and a number of others.

Commander Belknap, president of Merrimac Chemical Company, Inc., a subsidiary of Monsanto, was director of Naval Overseas Transport at Washington during the World War.

Determination of Formaldehyde in Pharmaceuticals

Formaldehyde may be determined in the absence of sugar in a substance such as a mouth-wash by treating 10 cc. of the product, which contains about 0.2% of formaldehyde, with 2 cc. of concentrated hydrochloric acid and 10 cc. of a normal solution of silver nitrate. The solution is then shaken and left for 15 to 20 minutes with occasional shakings. A black coloration forms in the presence of formaldehyde, and, after filtering, the precipitate is is washed with hot water, the filter perforated and rinsed with a solution of nitric acid, 1:3 concentration, the reduced silver being dissolved in this manner. After the solution has been diluted and the residual silver chloride has been removed by filtration, the silver in the filtrate is determined as chloride in the usual manner and calculated as formaldehyde on the basis that two molecules of silver chloride are equivalent to one molecule of formaldehyde. This method was found to be successful when the hydrogen peroxide iodine, and ammonia methods failed. O. Heim, Analyst, 1929, volume 54, pages 537 to 538.

American Oil Works, Titusville, and the Pennsylvania Refining Co., Kansas City, announced a merger of their interests on January 5. The merger was effected through a transfer of stock and the new firm will assume the name of Karns City Concern. Combined assets will be $4,000,000. Production capacity will be 3,200 barrels of crude daily.

John A. Beck, Karns City, is president of the merged company; A. B. Weingard, Titusville, Vice-president; Wayne K. Glenn, Butler, vice-president; Paul R. Beck, Karns City, secretary-treasurer, and W. W. Beck, Karns City, superintendent. Location of the main offices has not been determined.

Foreign Abstracts

Ammoniacal Aspirin

This is the name given to the compound, ammonium acetylsalicylate. This product has the following formula:—C_6H_4-$OCOCH_3COONH_4$. The object is forming this compound and using it for therapeutic is to combine the stimulating properties of ammoniacal salts with those of aspirin. This substance is prepared in the following manner. First acetylsalicylic acid is obtained in the usual manner. The acetylsalicylic acid (aspirin) is added in small quantities at a time and with constant agitation to an ammoniacal solution, of 40% concentration. The amount of aspirin added is equivalent to the weight of ammonia used. The result is a reddish yellow syrupy solution. When this solution is cooled down, a crystalline mass is formed, which is dried. The dry mass is then washed with a dilute solution of ammonia, and thereafter it is dried at a temperature of 50° C.

It is necessary to avoid an excess of ammonia in the preparation of this product, for the latter is very soluble in ammonia. It is also necessary to avoid an excess of water, for the latter will cause precipitation of salicylic acid.

Ammoniacal aspirin is slightly soluble in cold water, and more soluble in hot water. It is a white crystalline product which decomposes into aspirin at a temperature of 70° C. Other products of the decomposition are salicylic acid, acetic acid and phenol. It liberates ammonia to the extent of one-fifth of its weight in the intestines. M. Woldmann, Journal de Pharmacie et Chimie, May 16, 1929.

Lanolin Milk

The following is claimed to be a good formula for the preparation of this product. Ten grams of anhydrous lanolin are melted and there are added to it 100 grams of rose water containing one gram of borax and two grams of medicinal soap powder. A second formula states that 10 parts by weight of anhydrous lanolin are mixed with 20 parts by weight of water. Then there are added half a part by weight of soap dissolved in 20 parts by weight of water. This mixture is triturated intimately in a mortar and then 200 parts by weight of warm water and 5 cc. of tincture of benzoin are gradually added with constant trituration. According to Toellner, 50 parts by weight of anhydrous lanolin, 25 parts by weight of cocoanut oil, 8 parts by weight of borax powder and 25 parts by weight of medicinal soap powder are carefully triturated in a mortar for quite a prolonged time. Then the triturated mixture is slowly diluted with 400 parts by weight of lukewarm rose water and orange blossom water. The mixture is perfumed by the addition of 5 drops each of bergamot oil and tincture of musk. Apotheker Zeitung through Der Parfuemeur, 1929, page 42.

Calendula Salves and Creams

Salve is made from 50 parts by weight of calendula blossoms and 150 parts by weight calendula herb which are moistened with 150 parts by weight of spirit of wine, 90%, and 5% of ammonia of 10% concentration, in an earthenware pot. The materials are compressed in the pot and the latter is tied around with parchment paper. After 12 hours 1,000 parts by weight of wax salve are melted down, the moistened herb is introduced, digested at a temperature of 50 to 60° C. with frequent stirring and then pressed out. Mass is filtered through a heated funnel. The important advantage of this method is that the essential oil is retained in the salve. A simpler method is the one in which the extract of calendula is used. This extract is prepared in the same manner as extract of camomille. The calendula salve is claimed to be healing of wounds, swellings, swelling of the feet, burns and also sunburn.

Calendula creams are used for cosmetic purposes, for example for the protection of the skin, to prevent roughness and redness of the skin and the like. The cream may be made from 50 parts by weight of gum tragacanth, which are allowed to swell up in 250 parts by weight of water. Then one hundred parts by weight of glycerin are added as well as the same proportion of 95% alcohol, in which 2½ parts by weight of an easily soluble essential oil is dissolved. Then 50 parts by weight of calendula tincture, prepared in the same manner as tincture of arnica, are added.

A calendula grease-cream can be made by taking 40 parts by weight of the calendula salve and mixing it with 15 parts by weight of wool grease, 15 parts by weight of olive oil and thirty parts by weight of distilled water. Any desirable perfume may be added. Pharm. Zeitung, 1929.

Medicinal Soaps

The term, "medicinal soap," should be applied only to those soaps which are used for specific medical purposes. In order to obtain such medicinal soaps, which are really effective in their action, it is necessary to bear in mind the following important points. The soap, which is used as the starting point in the manufacture of medicinal soaps, is the same as that used for the preparation of good grades of toilet soaps. These soaps must lather easily; they must be easily piled and perfectly neutral. The introduction of the medicinal agent and its uniform distribution throughout the soap mass can be accomplished by milling the soap, as well as by other operations which are specially designed for this purpose. Medicinal soaps are also prepared by the cold process from glycerin soaps. Whatever process is used for this purpose, it is highly important that the properties of the medicinal agent should be known. This refers both to the chemical as well as the physical properties. Furthermore, the use to which the finished product is going to be put must also be taken into consideration.

Very often the consumer finds fault with the medicinal soap because it is not prepared in the proper manner. Milled borax soap may be taken as an example. Borax as such cannot be properly incorporated with a soap, for it makes the latter "gritty" and a "clean" cake cannot be obtained from the mixture. In order to make possible satisfactory incorporation of borax with soap, the borax is milled with the soap in the form of a mixture of a concentrated solution of borax and lanolin. In this case however, two substances possessing entirely different properties are brought together. Borax acts against the greasy luster on the skin of the face and make the latter dry, while lanolin is used in the treatment of a dry skin. The action of one, therefore, counteracts that of the other.

A good grade of borax soap can be prepared only in the cold, and the addition of potash lye in the proportion of 10 to 20% of the total lye used gives the soap a smooth surface. The following formula is recommended for making a good grade of borax soap: sixty parts by weight of Cochin-China cocoanut oil, 24 parts by weight of sodium hydroxide solution 38° Be. concentration, 6 parts by weight of potassium hydroxide lye of 38° Be. concentration, and 3 parts by weight of borax dissolved in 6 parts by weight of hot water. Eau de cologne, lavender oil or rose oil are best suited for perfuming the soap.

Another example of incompatability is shown in corrosive sublimate soaps and salicylate soaps. Corrosive sublimate (mercury bichloride) soaps are strong disinfectants. However, inasmuch as the soap always contains a certain amount of lye, the mercury bichloride is converted into mercury oxide, and its activity as a disinfectant is entirely destroyed. A chemical action likewise takes place in the case of salicylate soaps, in that the salicylic acid decomposes the soap and free fatty acids are formed. Furthermore, the entire soap decomposes and actually becomes rancid.

The activity and the purpose for which the soap is going to be used must also be taken into consideration in the manufacture

(*Continued on page 101*)

The Financial Markets

Drug, Inc. Buys Owl Drug

Louis K. Liggett Co., retail subsidiary of Drug, Inc., has now completed negotiations for acquisition of Owl Drug Co., large drug store chain operating on the west coast from California to Canada, and with some units as far east as Chicago. In 1928 the Owl company's sales totaled $18,671,000. There were 110 stores in operation at the end of last year. Owl Drug Co. in 1928 earned a net profit after depreciation of $714,247, equal after dividends on 60,000 shares of preferred to $5.42 per share on 40,000 shares of common.

Lambert Buying Prophylactic

Lambert Co., it is understood, has virtually concluded negotiations for the acquisition of Prophylactic Brush Co. While the terms of the proposed acquisition are not disclosed, Lambert Co. has about 1,800,000 shares authorized but unissued, part of which could be used. This acquisition would be the first move by Lambert Co. to extend its line from the Listerine products.

Lambert Co., in the nine months ended Sept. 30, 1929, earned $5,446,382, against $4,587,555 in the first nine months of 1928. Prophylactic earned $257,796 in the first six months of the year, against $281,340 in the like period of 1928.

McKesson Buys Three Houses

McKesson & Robbins, Inc., has acquired three additional wholesale drug firms, and is giving in exchange its common and preference stocks, together with some cash considerations.

Companies acquired are Berry, De Moville & Co. of Nashville, Tenn., for 6,940 shares of common stock, 1,264 shares of preference stock and $62,527 cash; Duff Drug Co. of Chattanooga, Tenn., for 768 shares of preference stock, 1,212 shares of common stock and $262,700 in cash, and Charles W. Whittlesey Co. of New Haven, Conn., for 8,099 shares of common, 3,113 shares of preference and $305 in cash.

Charles W. Whittlesey Co. in the six months ended June 30, 1929, had sales of $829,346 and net profit after all charges and taxes of $19,893. Duff Drug Co. had sales in the six months ended June 30, 1929, of $584,412 and net profits after taxes and charges of $27,649. Berry, De Moville & Co. in the six months ended June 30, 1929, had sales of $529,368 and net profit after taxes and charges of $12,484.

Kiefer-Stewart Addition

Kiefer-Stewart Co., Indianapolis wholesale drug firm, announces the purchase of the Lipman Taylor Refrigerating Corp., of Indianapolis. This purchase gives to Kiefer-Stewart Co. exclusive distribution of Lipman refrigerating machinery and Taylor ice cream freezers, and products of the General Refrigerating machinery and Taylor ice cream freezers, and products of the General Refrigerating Co., of Beloit, Wis. over a wide territory, covering Indiana, eastern Illinois, a large part of Ohio and southern Michigan.

Peoples Drug Stores, Inc., report sales for December amounting to $1,711,903, as compared with $1,355,174 for the same month last year, an increase of $356,729, or 26.32 per cent. Sales for the year amounted to $15,537,134, as compared with $11,347,240 for 1928, an increase of $4,189,894, or 36.92 per cent.

Neve Drug Stores, Inc., convertible A stock was sold at auction Dec. 18 at $51 for 10 shares.

Drug Stocks Follow Trend

Prices of common stocks of drug and cosmetics companies advanced slightly in the last week of 1929 after a decline of 9.4 points during December. The index of the Standard Statistics Co., of New York, on January 2 was 168.4, with drug stocks as a whole continuing to hold up better than the general list of industrials which registered 146.0 on the same date. Detailed figures on the drug index and the index for 337 industrials follow:

	1926 equals 100	
	Drugs and Cosmetics	*337 Industrials*
Nov. 27	175.2	145.5
Dec. 5	176.9	150.8
12	172.1	147.7
19	172.2	144.6
26	167.5	144.3
1930		
Jan. 2	168.4	146.0
1929 High	260.6	218.9
Low	158.8	134.5
1928 High	264.2	186.4
Low	166.8	132.5

Container Corporation Expands

The Container Corp. of America is to buy the Sefton Manufacturing Corp. and the Dixon Board Mills, Inc. Container Corp. has issued 117,514 shares of $20 par class A common stock to pay for the properties acquired and application has been made to list the additional stock on the stock exchange. This will bring the outstanding stock to 474,314 shares.

The acquired properties are in Brooklyn, Chicago, Anderson, Inc., and Carthage, Ind. The Sefton plants made corrugated containers, folding boxes and pails and the Dixon plant makes paper board and straw board.

Container Corp. of America reports consolidated net income of $622,885 for the ten months ended October 30 after charges and taxes. This is equal after preferred dividends to $1 a share on 274,175 shares of class A common stock and 39c a share on 588,289 shares of Class B stock.

Setay Co., Inc., as a stockholder of Neve Drug Stores, Inc., has filed suit against United Cigar Stores Co. of America, the United Retail Chemists, the Whelan Drug Co., and officers of the companies named for an accounting, because of alleged damage to Neve Drug Stores. Whelan Drug Co. has filed application for particulars.

Norwich Pharmacal Co. has declared a regular dividend of $1.00 per share and an extra dividend of 50c per share on its capital stock for the quarter ending December 31, 1929 and payable on January 1, 1930 to stockholders of record at close of business December 20, 1929.

Schaap Drug Corp. has been organized in Fort Smith, Ark. to take over the Morris-Morton Drug Co. and the John Schaap & Sons Drug Co. The holding company has been capitalized at $500,000, all of which is paid in, according to officials of the concern.

Parke, Davis & Co. declared yesterday a special dividend of 35c and the regular quarterly of 25c.

52 widely scattered Dealers visited in 1 month by Telephone

A WHITEWATER, Wisconsin, flour and feed company visited 52 of its dealers in one month by means of telephone calls. Sales, $29,958.89. Cost of calls, approximately $80.

The use of trading area calls by business houses is growing so fast because it pays. It is quick and inexpensive to go by telephone. Men find that telephone calls get attention. They encourage prompt decisions. They enable transactions to be consummated in minutes. They enable each man to go farther and accomplish more.

Territory development and the telephone go hand in hand. Telephone calls and personal calls can be alternated. Towns that otherwise would be missed because of lack of time can be reached quickly and economically by telephone from central points. For buying, selling, developing good-will—the telephone will keep you in constant touch with your entire territory. Develop your business area to the full by telephone calls . . . *Quick* . . . *Easy* . . . *Economical.*

AMERICAN TELEPHONE & TELEGRAPH CO. AND ASSOCIATED COMPANIES
BELL SYSTEM

Vick Financial Position Good

Vick Financial Corp. for period from June 10, 1929, to December 31, 1929, shows net profit of $136,203 after expenses and loss on sale of securities, equivalent to 10c a share (par $10) on 1,316,995 shares of common stock. On December 31, last, investments costing $12,069,810 had a market value on that date of $11,539,845. Book value of the common stock on December 31, 1929, was $9.68 a share computed on market value of investments.

Income account, from June 10 to December 31, 1929, shows: Interest and dividends received and accrued $330,184; net loss from sale of securities $147,795; expenses $46,186; net profit 136,203.

Balance sheet as of December 31, 1929 compares as follows:

Assets: Cash $134,172, call loans $1,000,000, investments at cost $12,069,810, interest and dividends receivable $73,810; total, $13,277,792.

Liabilities: Common stock (par $10) $13,169,950, earned surplus $107,842; total, $13,277,792.

In its report covering operations from commencement of business on June 10 to December 31, Vick Financial Corp. shows a shrinkage in its common stock of only 32c a share from the par value of $10, although it was operating less than five months before the stock market break.

Authority to purchase and retire 100,000 shares of the corporation's stock at not exceeding $8.50 a share will be asked of stockholders at the annual meeting January 28. Retirement of this stock will give the corporation the benefit of the difference between the book value and the purchase price of the stock. Total book value of $9.68 a share is shown as of December 31. If this stock is purchased at $8.50 a share a participation in $5.91 worth of securities is bought by the company for $4.73, or at a discount of 20% from the December 31 market value. This gives the corporation an immediate profit of $1.18 for each share purchased.

Stockholders will also be asked to approve action of directors in granting an extension to the Vick Chemical Co. until May 15, 1930, to the extent of 100,000 shares of its option to purchase common stock at $10 a share. Stockholders will be asked also to waive their rights to subscribe to an additional 400,000 shares and to authorize the board to issue such stock in their discretion at not less than $10 a share.

Since November 16 the company has increased its investments on declines in the market. "Many of the stocks we now own," says the statement, "have been acquired on a relatively high yield basis. The average return at cost on our total investments, including some non-dividend paying stocks, after deducting federal income tax at rate of 11%, is approximately 5.80%."

Classification and valuation cost and market value as of December 31, of securities owned follow:

Classification	*Amount*	*Cost*	*Mkt. value Dec. 31*	*Depr.*
Bonds.....	$3,829,000	$3,795,298	$3,752,533	$43,765
Pfd stocks....	*9,200	703,050	606,825	96,225
Com stocks...	*101,226	7,570,460	7,180,496	389,974
Total.....	.....	$12,069,809	$11,539,845	529,964

*Shares.

Common stock investments as of December 31 were as follows:

Railroad

2,500 Balt. & Ohio
2,200 Rock Island
1,500 Del & Hudson
2,600 Gt. Northern
3,100 Kan City Southern
2,300 Mo-Kan-Texas
500 N. Y. Central
1,600 Pennsylvania
2,100 St. L-San Francisco
1,500 So. Pacific
1,500 So. Railway

Industrial

2,200 Air Reduction
400 Am. Can
500 Am. Home Products
500 Am. Smelt & Refining
1,000 Am. Tobacco B
2,000 Anaconda
1,500 Atl Refining
100 Bon Ami A
2,100 Cal Packing
3,500 Can Dry
2,551 Coty
5,000 Drug Inc.
1,000 Gen. Foods
500 Gen. Ry. Signal
3,000 Gen. Refrac.
500 Gillette
3,000 Household Products
2,500 Kennecott
500 Kraft-Phen Cheese
2,600 Lambert
2,500 Lig & Myers B
500 Loose-Wiles
3,000 P. Lorillard
500 Nat Dairy Products
200 Nat Supply
4,000 Par Fam Lasky
200 Prairie Pipe Line
7,500 R. J. Reynolds
2500 Texas Gulf Sulphur
20,000 Vick Chemical
100 Wm. Wrigley, Jr.

Bank and Finance

375 Guaranty Trust N. Y.
3,000 Lehman Corp.

Preferred stock investments consist of 2,000 shares Missouri-Kansas-Texas Railroad 7% cumulative; 500 General Realty & Utilities Corp. $6 optional dividend, with warrants; 1,000 Raymond Concrete Pile Co. $3 convertible cumulative; 500 Shell Union Oil Corp. 5½% cumulative convertible; 200 Central States Electric 6% cumulative, with warrants; 300 Electric Bond & Share 6% cumulative; 200 Kansas City Power & Light, Series B, first 6% cumulative; 1,000 Southern California Edison, Series C, 5½% cumulative; 3,000 Selected Industries (75% paid) preferred and common units, with warrants; 500 Solvay American Investment Corp. 5¼% cumulative with warrants.

Bond Investments

Bulk of the bond investments are domestic, foreign issues amounting to only $108,000. Largest bond holdings are $2,000,000 Fourth Liberty Loan 4¼s; $305,000 Chicago tax anticipation 6% notes; $119,000 Detroit public improvement 4¼s-5s; $250,000 North Carolina 5% highway anticipation notes; $200,000 Federal Intermediate Credit Bank of Columbia 4½% debentures; $112,000 Seaboard Air Line Ry. first and consolidated A 6s; $100,000 Utilities Power & Light Corp. debenture 5s with warrants; $100,000 Philadelphia & Reading Coal & Iron Co. 6% conv. debentures; $125,000 Texas Corp. 5% convertible debentures. There are smaller blocks of Seaboard All Florida 1st 6s, Wabash refunding and general 5½s, Brooklyn-Manhattan Transit secured A 6s, New Orleans Public Service, first and refunding A 5s, Goodyear Tire & Rubber first and collateral 5s, Int. Cement convertible debenture 5s, Loew's, Inc., 6% debentures with warrants, Wilson & Co., Inc., first 6s.

Foreign bonds comprise Argentine, Belgian, Finland and Hansa Steamship Lines bonds.

Noxema Earns More

Noxema Chemical Co., Baltimore, in their annual report show a 30% increase in sales in 1929 as compared with the previous year, and a 70% gain in net profits. Gross sales for the year totaled $536,428, against $411,643 in 1928.

Net earnings of the company during the past year aggregated $116,790, or $3.33 a share, compared with $68,829 or $1.97 a share in 1928.

In his letter to shareholders, President George A. Bunting points out that as early as June a prosperous year was in evidence. Accordingly a 10% stock and a 5% cash dividend was declared in July. In December the board of directors declared an additional 10% cash dividend, payable January 7, to stockholders of record December 31.

Earnings of Monroe Chemical Co., including the earnings of Mary T. Goldman Co., acquired in August, 1929, are estimated for the past year at in excess of $400,000, equal after dividends on the preference stock, to more than $2.30 on the 126,000 shares of common stock to be outstanding after the exercise of all warrants. Warrants to subscribe for one additional share of common stock at $15 a share for each five shares held have been extended to January 14. The common stock, listed on the New York Curb Exchange, is paying dividends of $1.50 annually.

Drug Industry Stocks

1929 Dec. 31st Bid	1929 Dec. 31st Asked	1929 High	1929 Low	1928 High	1928 Low	Sales in Dec.	Sales from Jan. 1.1929 to Dec. 31st	ISSUES	Par $	Shares Listed	An. Rate	Earnings $-per share-$ 1928		1927
								NEW YORK STOCK EXCHANGE						
257	259	354¼	197	252¾	146	31,600	1,005,620	Allied Chemical	No	2,178,109	$6.00			10.03
119½	119⅞	184½	86	117¾	70½	627,300	3,828,200	American Can	25	2,473,998	3.00			4.11
140⅜	143	145	133½	147	136¾	4,300	48,100	pfd	100	412,333	7.00			31.66
36½	37⅛	81⅜	27	50¾	44	24,200	536,100	American Chicle	No	373,190	2.00	9 mo.	6.48	41.04
...	...	...	...	114	107			pfd	No	33,200	7.00	9 mo.	42.13	6.78
30½	31	55	20	55	43½	82,000	486,300	American Comm'l Alcohol	No	77,000	.....	3 mo.	2.66	
55½	56½	85⅛	40	86	59	30,967	424,697	American Home Products	No	534,000	3.00	6 mo.	2.52	3.67
...	...	...	...	83¼	70½		35,700	Certo Corp	No	300,000	3.00	9 mo.	5.19	3.87
12	14	23½	12	36	20	5,900	198,100	Container Corp. Class A	20	474,314	1.20	9 mo.	1.46	2.26
4½	4¾	11⅛	3½	19½	9¾	10,200	291,300	Container Corp. Class B	No	568,289	.60	9 mo.	0.73	1.13
50	50¾	92	40½	128⅞	53	128,800	1,291,000	Continental Can	No	*710,000	*5.00	8 mo.	7.61	7.21
...	...	126	115	128	123		2,710	pfd	100	51,125	7.00	8 mo.	111.39	86.82
90	91	126½	70	94	64½	119,000	2,422,000	Corn Products	25	2,530,000	2.00	9 mo.	3.00	3.50
142½	144	144½	137	146½	138½	1,970	29,710	pfd	100	250,000	7.00	9 mo.	35.63	42.40
24½	24¾	82½	20½	89⅞	62⅛	125,210	2,820,210	Coty, Inc	No	1,471,985	2.00	9 mo.	9.23	10.80
77⅜	78	126½	69	120½	80	73,600	1,116,800	Drug Incorporated	No	2,183,990	4.00	8 mo.	3.60	11.47
54⅛	54⅞	79½	40	84	64½	8,900	185,100	Household Products	No	575,000	‡4.00	6 mo.	2.64	5.22
8⅛	9¼	23	8⅛	27½	13½	700	84,600	Kresge	10	3,678,720	‡1.60	9 mo.	2.76	3.76
60	62	76	60	118	110½	430	4,850	pfd	100	20,000	7.00	9 mo.	512.30	698.85
98½	99	157½	80½	136⅜	79½	96,300	2,839,300	Lambert Co	No	571,906	‡6.50	9 mo.	6.62	6.23
29½	31	68½	28	64⅞	38	12,700	491,600	Lehn & Fink	No	295,000	3.00	6 mo.	3.25	*4.32
32	33	59	21½	50⅞	45½	20,000	2,813,700	McKesson & Robbins, Com	No	664,409	1.60	4 mo.	1.42	0.91
45	47	63	40	63¾	54	6,600	145,700	pfd	50	315,086	3.50	4 mo.	4.15	8.94
48	49	80½	47	190	117½		914,080	Monsanto Chemical Co	No	310,852	1.25	9 mo.	6.30	6.11
38½	39	72⅜	29	...	...	71,000	80,100	Mathieson Alkali	No	147,207	6.00	9 mo.	9.54	10.93
52	52	89½	43	95⅞	74½	9,800	216,000	Owens-Illinois Glass Co	25	768,860	4.00	9 mo.	4.13	5.37
26	27	87⅞	23	56⅜	47½	8,200	343,100	Park & Tilford	No	200,000	3.00	9 mo.	5.09	3.70
46	50	82½	35	91	52	960	5,580	Prophylactic Brush	No	100,000	‡4.00	6 mo.	2.47	6.18
...	...	...	...	...	...			Rossville Com'l Alcohol Corp	No	120,000	.....			
4½	4¾	41½	3½	...	...	69,725	1,214,325	Schulte	No	1,121,667	3.50	6 mo.	1.99	4.90
54	55	65⅞	50	67½	35½		3,500	Sharp & Dohme, pfd		162,500	3.50			
8⅜	8¾	22⅛	5½	23⅛	11⅜	3,700	162,400	Sweets Am	50	100,000	1.00	9 mo.	0.97	0.47
135	135½	243¾	95	138	102½	261,200	2,285,600	U. S. Ind Alc	No	240,000	6.00	6 mo.	3.90	7.26
...	...	...	...	125½	118½		880	pfd	100	60,000	7.00	6 mo.	19.12	36.03
4½	5	13½	3	...	...	25,200	201,100	Vadsco Sales		1,021,573				
38½	39	51⅞	33	85	58	18,500	559,500	Vick Chemical Co	No	400,000	4.00		6.06	5.36
69½	69½	103⅜	52½	225⅜	175½	207,100	2,320,400	Woolworth, F. W	25	3,900,000	6.00			9.06
68	69⅛	80½	65	84	68	1,900	195,600	Wrigley	No	1,800,000	‡3.50	9 mo.	4.38	5.43
								NEW YORK CURB						
...	...	40¾	10½	28½	11⅝	4,900	188,800	Amer. Sol. & Chem. Corp., V.T.C.	No	160,000	.....		1.58	0.17
28⅞	29½	42½	25½	47½	25½	4,000	97,200	Con. Partic pfd	No	100,000	$3.00		4.00	3.17
...	...	210	130	...	...		800	Ches. Mfg. Co	25	120,000	.....			8.49
52	53	90	40	92	75	10,100	66,400	Colgate-Palmolive-Peet Com	No		2.00			
50½	50¾	90	40	...	...		900	pfd	No		6.00			
2¼	3	57½	2	57¼	56	4,550	31,950	Davis Drug Stores Allot. Ctfs	No	100,000	.....	7 mo.	6.71	5.02
6	7	26⅛	3½	...	...	17,100	88,200	Helena Rubenstein		135,000	.....			
...	...	41½	17⅞	23	7½		19,210	Heyden Chemical Corp	10	150,000	.....			1.02
...	...	...	...	...	...			May Drug Stores	No	200,000	1.50		1.38	1.82
50	50½	67	47	72	50½	2,500	38,700	Mead-Johnson	No	165,000	3.00	6 mo.	2.94	6.33
1	4	12	1½	28½	10½	600	5,920	Nauheim Pharmacies Com	No	90,000	.....			3.03
...	...	32½	6	37⅜	20½	1,500	8,510	pfd	No	45,000	2.50			8.56
...	...	58½	40½	55	38	1,800	53,406	Parke Davis & Co	No	4,747,829	1.00		1.73	1.54
45	48½	94	45	91	48	3,800	63,350	Peoples Drug Store	No	122,250	1.00			3.31
...	...	97½	81½	300	247		27,325	Proctor & Gamble	20	1,250,000	8.00		11.96	11.38
...	...	30	16⅜	...	...		4,400	Sharp & Dohme, Com						
...	...	...	...	...	...		307,400	Standard Brands, Inc						
10½	10½	24	10½	..	...	4,800	90,700	Stein Cosmetics						
48⅞	55⅛	107¼	32½	102½	37½	19,900	238,300	Walgreen Co. Com	No	766,354	.....	9 mo.	2.17	1.59
19½	20½	44⅜	13	48¼	27	70,600	318,800	Zonite Products Corp	No	176,000	.....		6 mo.	0.98
								CLEVELAND						
...	...	80	60	112½	25	682	3,676	Dow Chem. Co	No	120,000	6.00			
...	...	107¼	100	107	103⅜	5	1,129	pfd	100	30,000	7.00			
...	...	42	20	30	24	645	12,750	Miller Wholesale Drug Com	No	17,000	1.60			
...	...	51	24	24	21½	117	14,514	Weinberger Drug, Com	No	20,000	.....	9 mo.	3.51	1.35
								CHICAGO						
...	...	52	36	...	...	2,400	46,350	Abbott Laboratories	No	120,000	2.00			
4½	5	29½	2	31½	21½	4,050	106,535	Lane Drug Co., Com	No	90,000	.....	7 mo.	1.47	3.13
14½	15½	32	14	51½	23	3,450	45,560	Cum. pfd	No	65,000	.....	7 mo.	3.20	6.34
								CINCINNATI						
...	...	41¼	16	...	...	919	9,741	Dow Drug Co	No	90,000	1.00			
...	...	...	...	...	...	5	5	pfd	100	4,000	7.00			
								UNLISTED						
...	...	...	...	...	...			Heyden Chemical Corp., pfd	100	3,100	7.00			56.18
...	...	...	...	...	...			Merck Pfd	100	33,950	5.00			
...	...	...	...	...	...			Mulford, H. K. & Co	100	30,154	3.00			
...	...	...	...	...	...			Noxzema Chem. Co			.....			
...	...	...	...	...	...			Squibb Com	No	411,778	.....			1.69
...	...	...	...	...	...			pfd	No	63,888	6.00			16.92

*Before giving effect to 100% stock dividend.
‡Includes extras.

Gathering Vervain for transportation to distilling perfumers in Algeria.

Algerian Government Photos

Lemon-scented Vervain

THE so-called *verbena triphylla* of L'Hérit, or *lippia citriodora* of Kunth, is a dicotyledonous plant belonging to the family of *verbenaceae*, closely related to the labiates. It is lemon-scented, and must not be confused with the *verbena officinalis*, or wild verbena, which grows along the roads. There are, of course, different kinds of vervain, or verbena, grown, but the lemon-scented plant is the one utilized most extensively in the perfume and drug trades. At the present time, it is being very successfully cultivated in Algeria and Tunis, and it is said that over half of the world's supply now comes from these

Cutting Vervain in Algeria.

French colonies, particularly from Boufarik, in Algeria. This plant is found in the south of France throughout the district of Grasse, at Cannes, Antibes, Nice. Certain other sections of France, notably Montbrison, Lyons, Dijon, Avignon, Nimes, Arles, and Milly-en-Gatinais, near Fontainebleau, have also been found suitable. Used as it is by many people for making infusions, in addition to its being employed by the manufacturing perfumer, the cultivation of lemon-scented verbena has been developing steadily during the past few years.

According to Rolet, lemon-scented verbena originated in Peru and Chile, having been brought to southern Europe in 1784. It is a shrub of pleasing aspect, attaining a height of about 1½meters. It flowers bloom, as a rule, from July to September. They are small, in the shape of a four-pointed star, white on the exterior and a purple blue inside. The leaves, verticillated in threes, very elongated, are rough to the touch, resembling those of the peach tree, though less shiny and more pointed. Their taste is piquant, with a slight bitterness. Rubbed or crushed between the fingers, they give off the odor of lemon.

Dangers Guarded Against

In order that this culture be grown satisfactorily it is necessary to protect it against the cold of the northern winds. True, it is regarded as being a very hardy plant, but if sheltered from the chilling winds of the north it will repay the grower by furnishing him with a more profitable yield than would be the case otherwise. Furthermore, lemon-scented verbena should be planted in soil which can be sufficiently dried, or which automatically dries or drains itself. If this precaution is not followed, the roots are liable to be subjected to a type of rot peculiar to this plant. For this reason, the conditions existing in Algeria and Tunis have been proved to be excellent for this culture, the dry climate there, combined with adequate rains, making for exceptionally fine and large yields.

Propagation of lemon-scented verbena is effected by means of seeds, slips, layers, but particularly by splitting the stalks. When using the slip method, it is best to begin operations some time during the month of August, especially if the work is to be done out in the open air. However, if one possesses a greenhouse, it is possible to work practically all summer in sections with a climate like Nice, for example.

Slipping of the herbaceous branches is possible from February to the end of May, provided it is done in a warmed greenhouse. The young sprouts, measuring anywhere from 5 to 8 centimeters, take root in about 15 days at a temperature of 15 to 16° Centigrade. They are then placed in three-inch pots, and a month later they are planted in the earth outside. It must not be forgotten, however, that the transition from the greenhouse to soil has to be made at a suitable time. Furthermore, the sprouts require rather frequent watering, in order to give them life.

Propagation by the layer method, which consists in fastening a shoot into the earth to strike root while attached to parent plant, is best carried out using all of the lower branches, trimmed a bit. These are then planted all around the parent plant. When the branches have taken root satisfactorily, they are weaned, or disengaged, from the parent plant to be planted separately. This method does not always give the best results, being rather long of accomplishment and sometimes very difficult to carry out successfully. Planting is done in February-March, and the fertilizer used is usually composed of ordinary manure and chemicals, the proportions being about half and half.

In order that the yield be of normal quality, it is necessary to apply considerable care and attention, particularly with respect to employment of fertilizers. This culture also requires earthing up for the Winter, so that it is amply protected against the cold. If properly taken care of, the lemon-scented verbena plant should produce over a period of about ten years. The yields, it is estimated, run to approximately 6,000 kilograms per hectare. Naturally, this figure is a variable one, depending entirely upon the climatic conditions, and the attention paid the plantation concerned.

Gathering Period

The gathering of verbena is undertaken, as a rule, some time during the middle of July, and often as late as the middle of October. A season usually includes two cuttings, the first either during the latter part of June, or early part of July, and the second at at the end of September, or first days of October, depending entirely upon existing conditions. If well supplied with manure, a plantation may give three cuttings, the second cutting then falling some time in August, and the third in October. It is not wise, however, to retard the last cutting too much, for the reason that the rains of September are liable to encourage a kind of rust, or blight, which attacks the leaves.

When gathered, the stems or branches, to which the leaves are attached, are bound together in small bundles, and so delivered to the distilling perfumer or herbalist, as the case may be. For the herb trade the leaves are allowed to dry, and, in order to be considered of value, the leaves must retain their color. The distilling perfumer's results are dependent upon the woodiness present in the plants treated, as only the leaves are aromatic.

Confusion often creeps into the manufacturing perfumer's mind when confronted with the purchase of what is known as oil of vervain, for the reason that a number of widely differing essential oils of various qualities are included in this broad category. For example, there is the so-called oil of vervain coming from India, which is, actually, an oil of lemon grass. Other oils of vervain are produced in Spain, one

known as thyme lemon oil, taken from a plant called *thymus hyemalis*. Genuine oil of vervain, or lemon-scented verbena, is, however, secured only from the *verbena triphylla L.*, described in the foregoing paragraphs, and which is being cultivated so successfully in the Grasse region, Algeria and Tunis. By the Grasse region is understood, of course, that entire section in the south of France which serves the distilling perfumers located in Grasse and the surrounding districts.

The oil of vervain produced in Grasse, when purchased in its genuine or original state, has a reputation for excellent quality. That produced in Boufarik, Algeria, is also eagerly sought after by makers of the better grades of eaux de Cologne, as well as manufacturers of certain perfumes in the de luxe class. Soap manufacturers also use the genuine oil of vervain in the finer products, due to its stability and holding powers, insofar as this type of odor is concerned. Apparently, adulteration is practised rather extensively in connection wil oil of vervain, as the genuine product, because of high cost and small production, is felt, by many manufacturing perfumers, to be practically prohibitive, except for use in the de luxe type of products.

In the language of flowers lemon-scented verbena, or vervain, is found to be *enchantment*. During the Middle Ages vervain, or verbena, and ambergris were the preferred perfumes. At the present time, it is said that the odor of vervain serves to make a person artistic and genial as to disposition.

Wild vervain, or *verbena officinalis*, which grows along the highways, and by-paths, is called the sacred herb, because of its reputed reaction upon the liver and the blood. This type of vervain is produced in various sections of France, having been domesticated by certain growers of aromatic and medicinal plants.

Good Demand in Mexican Cosmetics, Perfumes Market

There are at least five companies in Mexico manufacturing and distributing complete lines of toilet or beauty preparations and these firms appear to be constantly expanding due, it is believed, to the high import duties which are assessed on preparations of this nature. In addition to these companies, there are firms specializing in single products, such as face creams and dentifrices. Considerable quantities are also imported into Mexico from the United States, France, and other countries, but since the Mexican customs authorities do not classify the articles separately, it is impossible to furnish statitstical data showing the imports of separate items. In making a study of the market, it has been found that single products are rarely introduced alone, the majority of such preparations having been introduced in complete lines. There is a great number of such lines in the market at present, of which five as previously indicated, are manufactured in the country. The department stores are practically controlled by French capital and as a consequence a great many of the products sold are of French origin. (Consul General William Dawson, Mexico City.)

Vivaudou F. T. C. Hearing

Final arguments in the V. Vivaudou, Inc., case, in which the Federal Trade Commission charges the concern with violation of Section 7 of the Clayton Act, were made December 11. Section 7 prohibits the acquisition of stock of a competing company in order to reduce competition.

Edward L. Smith, attorney for the Federal Trade Commission, declared that this concern had entered into a contract with the Melba Manufacturing Co., Ill. for the acquisition of all its assets at a price of about $1,315,000; that they then organized the Perfumerie Melba Corp. and that through the ownership of the stock of this corporation the Perfumerie Melba company was prevented from entering into competition with the Vivaudou company.

The aluminum case was cited as one similar to that before the commission. In this case the Circuit Court held that the formation of a third company by two companies in competition with each other constituted a restraint in competition and a violation of the Clayton Act.

Mark Eisner, attorney for the respondent pointed out that the Vivaudou company contracted for only the physical assets of the Melba company and not the capital stock and that the Melba company was still in the possession of its original owners. He outlined that only little competition exists in this line of business and that the aluminum case should have no bearing on this case because it was an instance where two companies were in direct competition with each other and then agreed to form a third company with each holding a part of the stock.

Ungerer & Co., New York, has appointed Even M. Tysdal manager of its St. Louis office, effective January 1. New address in that city is 1853 Railway Exchange Building.

Mr. Tysdal has been affiliated with the essential oil business in the Mid-West for the past fifteen years, six years of which were spent in laboratory work and the balance in sales.

Plough's Beauty Creations is the new name given by Plough, Inc., to its Black and White line of cosmetics. The words "Black and White" will be removed from all labels and advertising copy, the products simply being called "Plough's Face Powder," etc.

Oakley & Co., perfumery manufacturers, have moved their laboratories and offices to the Cramwell Building, 336-340 Manhattan ave., Union City, N. J. Manufacturing floor space has been increased to 9,500 square feet and new machinery installed.

The Ross Co., New York, manufacturer of Winx eyelash preparations and Port Rouge, has appointed Hommann, Tarcher & Sheldon, Inc., New York advertising agency to direct the advertising of these products.

Elsie Pierce, New York, beauty specialist, has appointed Addison Vars, Inc., New York advertising agency, to direct her advertising account. Newspaper, radio and theater program advertising will be used.

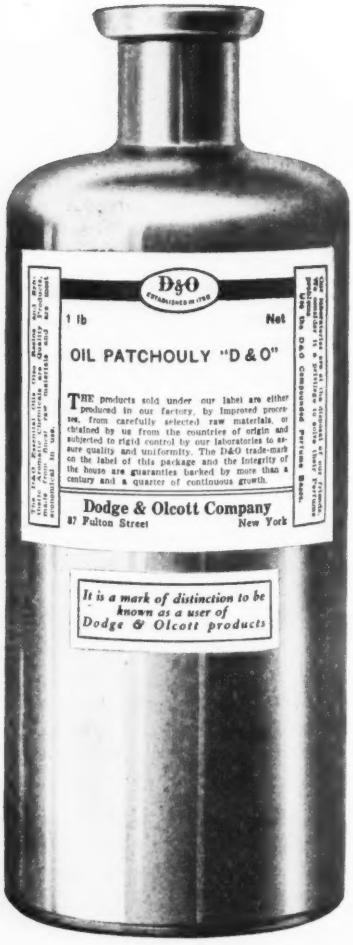
Cleopatra Chemists' Corp., New York, manufacturer of cosmetics, has appointed Littlehale, Burnham, Fulton, Inc., advertising agency of that city, to direct its advertising account.

Golden Peacock, Inc., Paris, Tenn., has appointed Erwin, Wasey & Co., Chicago, to direct the advertising for Golden Peacock Bleach Cream.

Van Ameringen-Haebler, Inc., have opened at St. Louis in charge of Clifford L. Iorns. The office is located at 826 Clark ave.

D&O
ESTABLISHED IN 1798

ESSENTIAL OILS
and Kindred Products


D&O
ESTABLISHED IN 1798
1 lb
Net
OIL PATCHOULY "D & O"
THE products sold under our label are either produced in our factory, by improved processes, from carefully selected raw materials, or obtained by us from the countries of origin and subjected to rigid control by our laboratories to assure quality and uniformity. The D&O trade-mark on the label of this package and the integrity of the house are guaranties backed by more than a century and a quarter of continuous growth.
Dodge & Olcott Company
87 Fulton Street
New York
It is a mark of distinction to be known as a user of Dodge & Olcott products

As it flows

from our stills!

Absolute purity guaranteed

It is one of the D & O products

DODGE AND OLCOTT COMPANY
87 Fulton Street New York City

"The integrity of the house is reflected in the quality of its products."

Habillons Nos Parfums! --

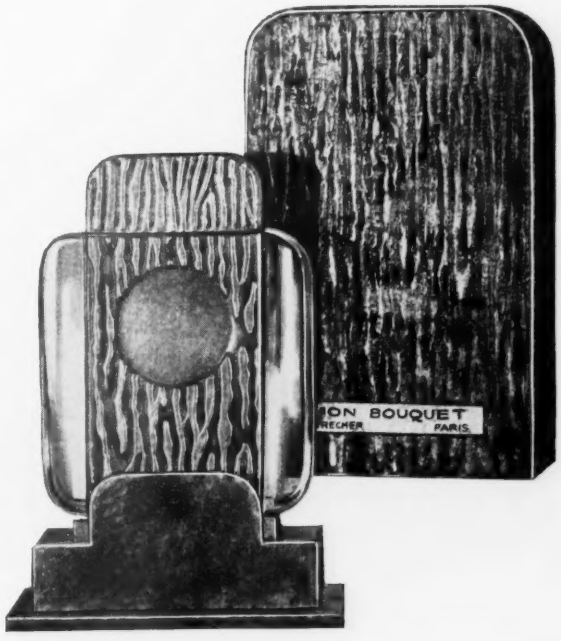
Let us Dress Up Our Perfumes!

By L. Risacher*

Perfumes and toilet articles can be given a distinct personality if packaging artists and specialists are allowed to package a quality product. Mr. Risacher of Paris has devoted his entire business life to this work. He has written this article exclusively for Drug Markets so you may get an idea of just what is done in France.

NOBLESSE oblige . . . From France, the land of perfumes, from Paris, the capital of fashion, come presentations in the way of artistically created packaging that carry the genius of their creators to the far ends of the earth. Those living in other countries no longer take into their view only the beautiful perfume-flower district of Southern France—Grasse and its world-renowned floral cultures—but also the artists who create for the perfume, the living soul of a flower, an artistically, harmoniously conceived presentation for the delectation of an eager, beauty-seeking clientele drawn from every country in the world.

This *flacon*, or bottle, designed to hold so many drops of precious perfume; this box especially created for an impalpable powder; the paper; the *cachet*; the ribbon chosen to encompass all; represent so many little marvels of taste, ingenuity, research. And the creation of any one of these small objects—bottle, box or *cachet*—demands as much talent as that required for the creation of a sumptuous toilette carrying abroad the renown of French style and fashion.

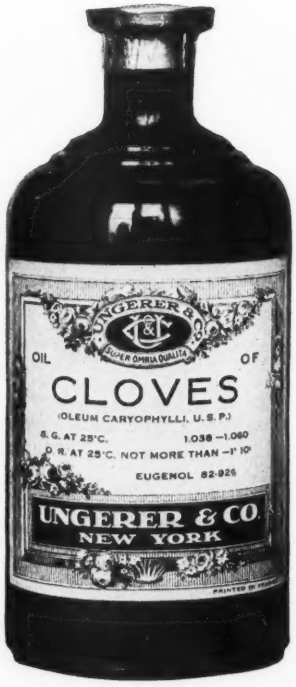


*Editions d'Art Etablissements Risacher et Cie., Paris, France.

The Significance of a Label

UNGERER LABELS carry as full and complete chemical and physical specifications of the products sold under them as is practical. The label is a guarantee that the product meets those specifications and further that it is pure and of the finest quality.

¶ That the house of Ungerer has the confidence of the largest purchasers of essential oils, perfume and flavoring materials is tacit recognition of their high standing, and signifies definite approval of their policy of uncompromising maintenance of quality.



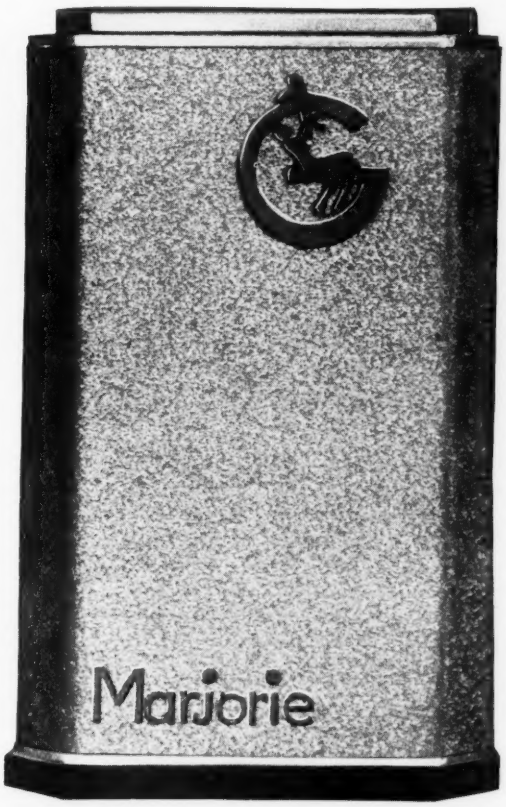
"Our Quality is Always Higher Than Our Price"

UNGERER & COMPANY
NEW YORK

Everyone in the business world recognizes what a pledge for sure success is contained in the creation of an original, or artistically designed package for a product, and this is particularly true as applied to perfumes and toilet preparations of every kind. With this fundamental fact in mind, specialists in the art of packaging have in the present age brought the creation of beautiful presentations onto a plane of excellence never before attained.

In order to dress up a product with a thoroughly original and individual package, it has been found that even the most skilled handicraftsman, in the possession of every facility, cannot produce a presentation in its entirety. The art of designing a suitable, attractive box for a perfume, for a powder, demands the knowledge and application of a specialist.

First of all, a creator of artistic boxes must have a thorough and workable understanding of the various decorative styles which existed in the past, and which are being developed to-day. In fact, after having studied the product to be presented to the public in an attractive dress, the artist must know which style to choose, for the purpose of emphasizing the personality of the perfume, powder, or other toilet preparation. In other words, the style chosen and used should bring out a sense of fitness all around, taking into consideration a product's particular nature, the name of the product, as well as the clinetele for which it is destined.



Shall we follow the art of the Persians, with its ornamentation, its fantastic volutes, or spiral scrolls, in seeking inspiration for this powder box ?

Shall we go to the art of the Chinese, with its embellishments, its lacquers, the magnificent decorations on its porcelains, which we will meet with again on this bottle ?

Or shall we follow, in its simplicity, in the splendor of its motifs, that form which the Exposition of 1925 revealed to us, and which, since then, has been proving itself in constant progress ?

The rough sketch on paper must be transferred into reality, fact. To do this the artist, must, therefore, be able to handle with equal facility the sculptor's clay and chisel, as well as the painter's palette and brush.

To choose an appropriate, finely woven fabric, the artist must take on the soul of a silk weaver from Lyons; in order to determine the shape and beauty of a bottle, he will transform himself into a glass-blower from Murano; to handsomely emboss a label, he will borrow the engraving tool of a Florentine goldsmith.

With the rough sketch, or model, now executed and projected as a reality, it is then necessary to see that actual manufacture is satisfactorily carried out. This step is beset with difficulties: printers, lithographers, colorists, box makers, glass-blowers, and other specialists, all of whom are indispensable to the artist desiring to turn out a satisfactory piece of work.

All of these details must be carefully executed by an organization wishing to produce creations that are original, distinctive, harmonious, and which carry a definite sales message. Then there are the questions relating to speed in delivery, consistent with the artistry involved, and also the price, which can not and should not reach prohibitive heights.

The accompanying illustrations, chosen from a number of models executed for some of the largest toilet preparation concerns in the world, will give the reader of DRUG MARKETS an idea, at least, of what is being done in the field of packaging among certain French firms. Naturally, the black and white of the photographs cannot be expected to show the models displayed to their best advantage, as the charm and elegance of the originals, in color, are, of course, lacking.

The bottle "Mon Bouquet," in crystal-glass, engraved on one of its surfaces, covered on the other with an application of hammered pewter capsuled with the same metal, reposes on a silvered pedestal, which shows it off to its best advantage, at the same time assuring stability.

Enclosing the whole, the box, forming the cover, is entirely covered with hammered pewter.

The result is purity of form, beauty of materials, which constitute an ensemble of extreme refinement.

More modest in conception and in materials used, but of like inspiration, is the powder box, which matches the bottle, making this creation, also, stand out as individually attractive.

The bottle "Marjorie," resting upon a pedestal of blue and silver velvet, is, like the former one, covered by its box. The beauty of this, covered as it is with velvet-like and silky material of a very soft gray, with reflections of silver, is enhanced by the trade-mark of the concern for which it was created. (One of the Parisian houses known for its lingerie de luxe and fancy work of every description). This trade-mark, in blue, blue like the name Marjorie, together with the gray of the box, makes for a composition that is harmonious, discreet and refined.

European Coty Increases Earnings

Coty companies of Europe, in which Coty, Inc., the American company now holds a majority interest, report increases over 1927 earnings. Coty, S. A., the French company, shows the greatest earnings of any of the European companies, earning 44,137,000 francs in 1928, or $1,641,019. Earnings for the preceding year were $1,482,119.

The English company, Coty, Ltd. showed net profit for 1928 of $68,146, against $49,002 in 1927. Coty, Societate Anonima Romana, the Rumanian company, earned $7,365 in the 14 months ended December 31, 1928. The company was started in 1927.

Business of the Societe Francaise des Parfums Rallet, which was acquired in 1926 by M. Coty, was established in 1842 and had total annual sales in 1914 of 50,000,000 francs, largely in Russia, Asia and the Balkans. This organization was destroyed by the Russian revolution. In 1927 the company earned $12,707, and in 1928 this was increased to $18,927. Les Cultures Florales Mediterraneennes, the company which grows the flowers from which the essences are obtained, in 1928 had a loss of $21,288, compared with a loss of $12,501 in 1927.

The American Coty company in 1928 sold more than 13,500,000 boxes of powders and over 4,250,000 bottles of perfumes and toilet water. Rate of growth of Coty, Inc. has exceeded that of the French companies.

Charles Blair Leighton Dead

Charles Blair Leighton, general manager of W. J. Bush & Co., Inc., New York, passed away at his home, 26 Willow st., Brooklyn, N. Y., Dec. 23, after a very short illness. He was in his sixty-third year.

Mr. Leighton was born in London, England, the eldest son of James and Mary Leighton. Prior to 1898, W. J. Bush & Co., Ltd., of London, had maintained an American agency in New York, but the need for a direct factory branch became urgent as the American grew steadily, and in 1898, the company sent Mr. Leighton to New York to establish its branch office. Since that year, he was in full charge of the company's affairs in this country, and the business continued its constant progress under his direction.

According to the manager of a Singapore firm, there is an excellent market there for cheap talcum powder packed in attractive boxes. He has asked Assistant Trade Commissioner Donald W. Smith, Singapore, Straits Settlements, to endeavor to have American manufacturers, not represented in Singapore, send him samples and c. i. f. Singapore quotations. The packing is more essential than the quality of the powder, the colored tins being required instead of tins with labels. If he can get a competitive line he will be prepared to make attractive yearly contracts.

Walter S. Goff, new Chicago representative for Florasynth Laboratories, is now making his headquarters at 6808 Normal Boulevard.

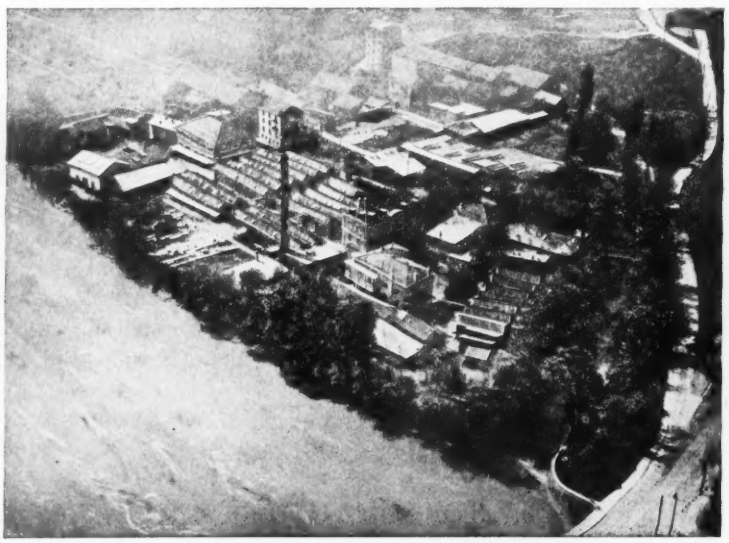
M. Naef & Co. 35 Years Old

Some idea of the size of the plant of M. Naef & Co., Geneva, Switzerland, manufacturers of synthetic aromatics and compounds, may be gained from the accompanying airplane view taken on the occasion of the firm's thirty-fifth birthday which is being celebrated this year.

The firm was established in 1895 by Philippe Chuit who undertook to manufacture ionone in particular for which he had discovered a new process. During this same year, Martin Naef and the firm took the name of Chuit & Naef. In 1898, two additional partners joined the firm which then became Chuit, Naef & Co.

More than one hundred items, practically all of which are original creations, are produced in this plant which covers an area of 140,000 square feet. Outstanding among Naef's contributions to synthetic perfumery are: Exaltine, a duplication of the principle of natural musk; Iralia and Orris-Violet of unusual utility; Dinanthine, a spicy carnation odor.

Ungerer & Co., New York, have been American selling agents for Naef for more than thirty years.



Plant of M. Naef & Co., Geneva, Switzerland

Synthetic Aromatics

Citral
Citronellal
Hydroxycitronellal

INTEREST in citral so far as the manufacturing perfumer is concerned comes from the fact that the citral secured from lemongrass represents the point of departure in the production of ionone, or artificial violet. Citral is an aldehyde of the oils of lemon, lemongrass, *bakousia*, in which it is found in its natural state. The citral taken from lemon is held by many authorities in the trade to be the best, by far, in quality. Its color is a pale yellow.

Much of the commercially current citral is taken from the different varieties of lemongrass (*andropogon citratus*) by way of the steam distillation process. The andropogon group of plants comprise a wide variety of graminaceous, or grassy, herbs that merit a great deal of concentrated study still, for the reason that up to the present time nothing more than the surface has been scratched. According to Gattefosse, Dr. Otto Stapf has classed them as follows: *Schoenantus*, or "foin de Chameau," found all over Africa, Afghanistan and Pendjab; *Iwarancusa*; *Nardus*, or citronella of Ceylon, Java, Malacca, etc.; *Confortiflorus*, which is very probably the parent plant of the citronella, although it has not much fragrance; *Flexuosus*, which gives the lemongrass of Malabar; *Coloratus*; *Citratus*, which produces the true oil of lemongrass and which is cultivated on a large scale throughout all Malaysia; *Martini* (Calamus Aromaticus R), or *Palmarosa*, from which the oils of palmarosa and of gingergrass are secured, according to Dr. Tombeck. Finally, the whorl-flowered bentgrass, or vetiver, comes from a variety of andropogon.

The multiplicity of these varieties and their diverse origins very often give rise to a complicated line of confusion. Experimentation has shown that the citronellas and the palmarosa contain a preponderant proportion of geraniol, which has a decided rose odor. The lemongrass varieties, or the contrary, are found to contain 60 to 80 per cent. of citral. One variety of palmarosa from New-Caledonia, however, contains 43 per cent. of citral, and is now being cultivated on a commercial scale.

Citral, which is widely used in the preparation of eau de Cologne, toilet waters, and in certain rose compositions, has a very pronounced lemon odor. It is also being employed in the manufacture of a number of the lemon soaps which have sprung into popularity all over the world. Because of its strength it can be used practically all alone as a lemon perfume in the making of soaps falling within the lemon category. A certain type of citral is also being successfully utilized in beverage and candy-making trades. In order to best preserve citral, it should be carefully protected from the adverse effects of light and air.

Citronellal

Citronellal is the dihydrogenated derivative of citral, and they are frequently found together, or in the essential oils of similar plants. This product is made up as follows:

$$C^{10}H^{18}O$$

The principal source of citronellal is the oil of citronella coming from Java. It is extracted by the so-called bisulphitic process, which combination is pressed, according to Gattefossé, for the purpose of getting rid of all traces of geraniol. As citronellal is very sensitive to action of the acids and alkalies, it is withdrawn from the bisulphite combination by means of a carbonate. Citronellal boils at from 89° to 91° C. under 14 m/m. It is reduced to citronellol by the action of the amalgam of sodium on its anhydrous and acid alcoholic solution, as Gattefossé puts it in his well-known work on synthetic perfumes.

The value of citronellal is found particularly in the fact that from it is derived citronellol, which has a rose odor with a suggestion of geranium present. Citronellal is, however, being used more and more in place of citral in order to obtain hydroxycitronellal, or artificial lily of the valley. Its use by the manu-

ODORS *Specialized*

May we share in the solution of your perfuming problems?

Our Laboratories are ready to give you the correct odor for your particular product.

Aromatic Headquarters

FOR

Creams
Perfumes
Bath Salts
Face Powders
Liquid Soap
Talcum Powder
Toilet Water
Insecticides
Deodorizing Blocks
and
Every Manufacturing Perfume Requisition

Givaudan-Delawanna, Inc.
101 FIFTH AVENUE, NEW YORK, N. Y.

GIVAUDAN SYNTHETICS DELAWANNA

facturing perfumer includes eau de Cologne, toilet waters, lotions of varying descriptions, and many other perfume compounds. The soap manufacturer also utilizes citronellal in the lemon, geranium, and eau de Cologne types of soaps.

Hydroxycitronellal

No synthetic aromatic has attracted the attention of the trade any more than hydroxycitronellal, or artificial lily of the valley. This important product is obtained by hydrolysis in a sulphuric medium diluted by citronellal first transformed into a bisulphitic combination. It is necessary to work at a low temperature upon the basis of a combination perfectly pure and dry.

The hydroxycitronellal called Laurine, taken from the name of its inventor, the chemist Laurier, has also been called *Tilleul, cyclosia*, etc., by different manufacturers, Gattefossé points out. It forms the base for lily of the valley, lilac, cyclamen and many other fine perfumes. In combination with methyl anthranilate it produces aurantiol, fine fixative for the orange flower odors. It is soluble in 6 to 7 volumes of 30% alcohol. Its viscosity is often due to the presence of dihydroxycitronellal, which is much heavier and the boiling point is placed at 150° under 11 m/m. Hydroxycitronellal like all the aldehydes combines in solutions of sulphite or of bisulphite of soda at 10%. Unfortunately, hydroxycitronellal is not stable in the presence of alkalies and cannot be used for perfuming soaps. For this particular use it is better to use dihydroxycitronellal, whose odor of lily of the valley is very much diminished, but whose holding qualities are perfect. The mixing of 10% of this product with terpineol renders the latter flowery and more agreeable to use in perfumes for soap. In extracts, or extraits, an excellent quality of hydroxycitronellal must be used in order to avoid some acid-like odors which are produced with a poor quality product.

For the benefit and use of the manufacturing perfumer we append the following formulae, appearing in Fouquet's recent work on the subject of synthetic perfumes, and, although the formulae cannot be guaranteed by Drug Markets, we feel that they should prove of interest from an experimental point of view, at least:

Cyclamen I

Hydroxycitronellal	550	cc.
Terpineol	150	cc.
Linalol	100	cc.
Jasmine oil	100	cc.
Phenylethyl alcohol	50	cc.
Violet leaves	5	cc.
Phenylacetic aldehyde	10	gr.
Duodecyl aldehyde C^{12}	5	gr.
Nonyl aldehyde C^{9}	5	gr.
Nonyl alcohol C^{9}	10	gr.
Mimosa oil (natural)	20	cc.

Cyclamen II

Hydroxycitronellal	550	cc.
Iononea	100	cc.
Jasmine oil (artificial)	75	cc.
Lilac oil (artificial)	100	cc.
Rose oil (artificial)	25	cc.
Phenylethyl alcohol	45	cc.
Cinnamic alcohol	25	cc.
Phenylacetic aldehyde	3	gr.
Duodecyl aldehyde C^{12}	2	gr.
Heliotropin	20	gr.
Musk (ketone)	10	gr.
Orris (oleoresin)	45	gr.

Gillyflower or Wallflower

Hydroxycitronellal	200	cc.
Linalol	250	cc.
Terpineol	100	gr.
Neroli oil	100	gr.
Phenylethyl alcohol	25	gr.
Iso-eugenol	250	gr.
Vanillin	25	gr.
Benzoin gum	50	gr.

Glycin

Hydroxycitronnel	300	cc.
Linalol	200	cc.
Terpineol	75	cc.
Neroli oil (artificial)	25	cc.
Jasmine oil (artificial)	225	cc.
Phenylethyl alcohol	50	cc.
Mimosa oil (natural)	35	cc.
Jonquil oil	15	cc.
Tuberose oil	10	cc.
Cassia or violet oil	10	cc.
Vanillin	35	gr.
Iso-eugenol	10	gr.
Phenylacetic aldehyde	5	gr.
Aldehyde C^{8} (Octyl)	5	gr.

Lily of the Valley I

Hydroxycitronnel	300	cc.
Linalol	250	cc.
Phenylethyl alcohol	200	cc.
Jasmine oil (artificial)	100	cc.
Cassia oil (artificial)	50	cc.
Jasmine oil (natural)	10	cc.
Tuberose oil (natural)	10	cc.
Lily of the valley (natural absolute)	50	cc.
Mimosa oil (natural)	15	cc.
Bitter almond oil (natural)	5	cc.
Aldehyde C^{12}	0.5	gr.
Aldehyde C^{9}	4	gr.
Aldehyde C^{16}	5.5	gr.

L. A. Barber has joined the staff of Ungerer & Co., and will be located at the home office at 124 West Nineteenth st. Mr. Barber was in the essential oil business for five years. He was formerly export manager for the Marinello Co., and Inecto, Inc.

PERFUMES---
To Add Sales Appeal

Special Perfumes for Cosmetics

Bath Salts
Face Creams
Liquid Soaps
Toilet Soaps
Face Powders
Talcum Powders
Hair Pomades

Special Perfumes for Industrial Purposes

Insecticides **Theatre Sprays**
Paper **Paradichlorbenzene**
Lacquers **Leather**
Ink **Rubber Fabrics**
Linoleum

EVERY manufacturer should be alert to the sales value and appeal of odor in his products—objectionable odors limit sales and should be reduced as far as possible and then neutralized by a pleasant perfume.

In general, raw materials should be purchased with respect to odor as well as other properties. When this is done many products are improved at once—then as a finishing touch cautious additions of a pleasant scent should be made.

The kind of odor to use will depend entirely on the article and no little skill is required to choose the right type, amount and lasting quality. For most purposes the cost of overcoming an objectionable odor or adding a pleasant one is very trifling.

The full facilities of our Perfume Research Division are at your disposal and we suggest that you place your problem before us.

FRITZSCHE BROTHERS, Inc.

78-80-82-84 Beekman Street, New York, N. Y.

Proprietors of PARFUMERIES de SEILLANS, Seillans, France

Sole Agents in the United States and Canada for

SCHIMMEL & COMPANY, Miltitz (near Leipzig) Germany, *and* CHAUVET & COMPANY, Cannes, France

Market Facts From Grasse

- Low Prices Discourage Growers
- Rose Trees Condition Fair
- Orange Yield Looks Good
- Jonquil Future Uncertain
- Orris Root Crop Lower

By O. C. Zilisch
Our Grasse Correspondent

WEATHER conditions in the Grasse district are, of course, uppermost in the minds of the growers of perfume-flower plants, especially since the experience passed through last Winter. Up to the present time there have been no causes for anxiety, and the temperature in the entire region remains mild. In fact, some of the producers wish that a slight cold spell might intervene, in order that the plants could enter into a complete state of rest. Precautions have been taken throughout the Grasse section to prevent, insofar as possible, any of the damage that occurred last year, in the event that an abnormal cold should again visit this district.

Low Prices Discouraging

It must be stated, however, that the low market prices for the perfume-flower of Grasse this season have not served to increase the interest of the growers very much. In fact, some of them are seeking other branches of agriculture in which to make a living, and 1930 is probably going to see another drop in the number of growers actually interested in production of perfume-flower plants. Most of the distilling perfumers, in order to place themselves entirely outside the risks incurred by such growing indifference, have, as the trade knows, established their own fields. Some of these are now very extensive as to area, and on these domains the various cultures are given the care they should receive in order to produce the maximum results. Perhaps, the grower who works independently is in the wrong when he is constantly clamoring for higher prices from the distilling perfumer, but conditions with respect to labor, it is said, make it impossible for the grower to make any money. Unless the grower can really see his way to make ends meet, it tends to render him dissatisfied, and for this reason a number of the cultures are either being gradually abandoned or replaced by wine grapes, or some other plant which promises a more satisfactory return. Those who have the situation to face are doing everything possible to ameliorate conditions during 1930, and if the steps taken are successful, then the whole problem should easily find a solution. One of the elements doing a great deal of constructive work along these lines is the Jardin d'Essais of Grasse, or Garden for Experimental Research, under the guidance of Mr. P. Boischot, Director. (A complete description of the work being done by Mr. Boischot appeared in the June, 1929, issue of Drug Markets.)

The jasmine plantations are still in a state of complete growth and vegetation in certain districts, and in a number of well-sheltered sections the jasmine is, at the present writing, in bloom. These flowers, coming so late, are, of course, not used, for the reason that they do not lend themselves to successful treatment, their perfume-giving power having been reduced to practically nothing. Many of the growers of jasmine are continuing with the dunging process begun a short time ago, and some of them are doing everything possible to disinfect their plantations, in order to protect them against a type of rot that has been attacking the jasmine plants of the Grasse region.

Jasmine, as has been explained from time to time, requires much care on the part of the grower, particularly during the Winter months, so that the plants will be sure to produce a yield commensurate with the work entailed. The cold spell of last Winter did some slight damage to the jasmine plantations in the Grasse district, and those owning this important culture are doing everything required to protect the plants from any possible approach of unusually cold weather or snow. A few new plantations are being placed, but, as reported last month, these do not run into the number this plant merits, pointing to the possibility of a lower yield than last year, which was slightly below normal.

Rose Trees Being Trimmed

Trimming of the rose trees, as well as the twining and twisting of the branches, is very advanced. On some of the plantations the dunging process, undertaken at this time of the year, has been placed in operation, and in a number of instances new trees are being put in to replace some of the old ones that are no longer producing satisfactorily. The condition of the rose trees at the present time is, on the whole, passable. Apparently, the cold spell of last Winter did not do a great deal of dammage, as was shown by the yield for 1929. In order, however, to prevent harm that might come to the rose trees this Winter, every precaution is being taken against an unusual touch of cold weather. The roses of Grasse, despite competition from those grown in other parts of the world, are still recognized as leaders by many in the trade. This is particularly true of the rose which blooms during the month of May, this flower giving an oil that supplies the manufacturing perfumer with an ingredient of high value. In fact, some authorities on roses go so far as to say that nowhere is this flower grown so successfully, from the distilling perfumer's point of view, than in Grasse, the soil and climate there creating a rose of exceedingly high perfume content. For this reason it is disturbing to many in the Grasse region to see growers, because of labor shortage and comparatively low prices paid for a season's yield, not paying the attention to the cultivation of the May rose that it deserves.

What the orange trees suffered during the cold and snow of last Winter is, of course, an old story. Reports continue to be favorable regarding the orange trees generally, as many of them progressed very finely during the Summer months, giving the growers reason to believe that the yield of orange flowers for 1930 will be satisfactory. This, of course, if nothing in the way of adverse weather conditions presents itself. In certain districts, like that of Saint Laurent-du-Var, for example, the orange trees are in such an advanced state of vegetation that a sudden lower-

Specializing in
PERFUMERS'
RAW
MATERIALS

ESSENTIAL OILS
AROMATIC CHEMICALS
TRUE FLORAL OILS
RESIN FIXATIVES

Sole U. S. Agents for

BERTRAND FRERES
Grasse, France
Floral and French Essential Oils

PAOLO VILARDI
Reggio Calabria, Italy
Oils Lemon, Orange, Bergamot

VANILLIN FABRIK
Hamburg, Germany
Aromatic Chemicals

CONSTANTIN MINTCHEFF, KETCHEDJIEFF
Kazanlik, Bulgaria
Otto Rose

H. RAAB & CO.
Roermond, Holland
Artificial Musks

P. R. DREYER *Inc.*
26 CLIFF STREET,
NEW YORK, N.Y.

ing of temperature might cause considerable damage. As the trade will remember, it was the districts of Golfe-Juen, Vallauris, Le Cannet, that were affected most, many of the trees in these sections having been completely destroyed by the cold and snow.

The ingathering of tuberose bulbs has been terminated, and those which are no longer considered profitable have been destroyed. This culture, as already pointed out in previous reports, is gradually diminishing in the Grasse district. Not only the fact of a decreasing use of the essential oil is to blame, but the tuberose, in order to be remunerative to the grower, requires an unsual amount of attention and care. The bulbs are easily attacked by a kind of rot, particularly in soil that is too wet, and which can not be successfully dried. Planting is, as a rule, done from March to May, generally during the month of April. Just what the situation will be in 1930 with regard to the tuberose is not known, but it is felt that the yield for next season may again see a drop below that of 1929, which, as reported, went way below what is considered as normal for this flower. Only a sudden, definite demand by the manufacturing perfumers for the essential oil could persuade the growers of the tuberose to drop their indifferent attitude, as they now feel that the trouble and work entailed far outweighs the comparatively meager returns.

Jonquil Situation

Placing of the jonquil bulbs is proceeding along normal lines, and if the weather remains favorable, bringing with it several good rains during February and March, the yield will, it is predicted, exceed that of last season. The jonquil, *narcissus jonquilla*, appears during the months of March and April. It is a hardy culture, but the frosts of last Winter did considerable damage, as the trade will remember, with the result that the droughts which later visited the region brought the yield down to about 50 per cent. normal. Furthermore, the jonquil requires considerable care. A change of soil must be effected every four years, and this is an expensive process. Last year the roots of the bulbs were attacked by a small insect, causing a great deal of damage. The price paid for last season's flowers was 28 francs (approximately $1.12) per kilogram delivered to the distilling perfumer's place of business. Although somewhat below the 1928 price, the growers found the 28-franc level fairly profitable. No price has been set for the jonquil of the approaching season, but the opinion held is that it will, at least, equal that of last year. All prediction is, however, a matter of conjecture, everything depending upon the actual situation to be met when the jonquil is ready for gathering and treatment.

As reported in the December issue, the Winter yield of cassia flowers has, so far, promised very little. In fact, at the present time the cassia crop demonstrates no change for the better, many of the trees having been severely damaged by the adverse weather conditions of last Winter. In addition to the cassia gathered during the months of November and December, there is also the early spring yield to be taken into consideration. Every indication, however, points to a deficient yield for the spring crop also, unless the Winter weather this year proves more favorable than usual. In the district of Le Cannet no yield of any sort is anticipated. Prices for this oil, as pointed out in last month's report, should, because of existing conditions, see a distinct rise in price, unless the stocks still in existence should prove sufficiently large for future demands. This condition is, however, discounted by those in a position to know, and higher prices are being predicted with what amounts to practically absolute certainty.

Mimosa, *mimosa dealbata*, plantations were affected by the severe cold of last Winter to such an extent that they will require some time to recover. This culture seems to grow best in the heart of the so-called Esterel section, or wherever a silicious soil is found. The *mimosa dealbata*, grafted as it is upon the *mimosa melinoxilum*, begins to bloom at the end of January, as a rule, giving one an idea that Spring follows the Autumn in the south of France, which is, of course, not true. Just what the situation will be this season can not be foreseen, except that the damage of

WHAT ESSENTIAL QUALITIES DO YOU LOOK FOR IN PRECIPITATED CHALK

Is it....

1. PURITY
2. COLOR
3. PHYSICAL CHARACTER
4. CLEANLINESS
5. UNIFORMITY
6. FREEDOM FROM GRIT
7. ABSORPTIVE PROPERTIES
8. BINDING POWER

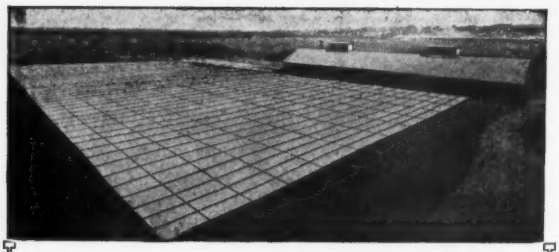
WHATEVER type of material you may require or specify our new plant has the facilities to furnish. Will you let us prove it?

INDUSTRIAL CHEMICAL SALES COMPANY INC.

INDUSTRIAL CHEMICAL

SALES COMPANY :: INC.

230 PARK AVENUE :: NEW YORK



BEEHIVE BRAND
BEESWAX

Absolutely Pure
and
Sun-bleached

Stearic Acid—Red Oil
Glycerine—Ceresine
Spermaceti

WILL & BAUMER CANDLE CO., Inc.
Syracuse, N. Y.

T.L. PIONEER
BEESWAX

Pure White Sun Bleached

Guaranteed under Food and Drug Act of June 30, 1926, Serial No. 4068.

Specify
T. L. BRAND

Sun Bleached under glass from the highest quality crude yellow beeswax obtainable. Especially suitable for the manufacture of toilet preparations of quality, that will keep and not turn rancid or yellow.

PIONEER BRAND---Yellow

THEODOR LEONHARD WAX CO., Inc.
HALEDON PATERSON NEW JERSEY
Long Distance Telephone: Armory 1690

PIONEER T.L.

last Winter will, naturally, affect this year's yield tangibly. There are several other varieties of mimosa, known as the *motteana*, and *baleyana*, more sensitive to the cold than the *dealbata*. Many of these were very badly touched by the frost and snow, and some of them practically ruined. As will be readily understood, good weather conditions for the good of the mimosa yield is being eagerly looked forward to by everyone concerned.

Orris root production for 1930 will continue weak, and it is anticipated that no normal crop can be counted upon before 1931. The 1930 yield, like that of 1929, will see a decrease, due to the large number of rhizomes being purchased by the growers in order to develop their plantations. With a deficient crop in sight, there should, normally, be no lowering of prices on the market. From 1931 on, however, there will, in all probability, be a reduction, because of the production figures expected from the plantations now in the process of development.

Violet gathering is approaching, and the Parma violets growing in the Grasse district, although not promising a large yield, are, at this writing, developing along normal lines. Many of the Parma violet plants were affected by the dry spells of this last summer, naturally cutting down the quantity of flowers to be gathered. The Parma violet can not bear up under extended dry periods, and because of adverse weather conditions, as well as diseases which attack it, this flower is gradually diminishing in importance throughout the Grasse region. The Victoria violet, being used more and more by the distilling perfumer, according to present indications, will show a normal yield. In fact, if weather conditions remain wholly favorable the crop during the months of March and April will be above that of last year. The price for Victoria violets grown in Hyeres, for example, will be about 8 francs (approximately 32 cents) per kilogram delivered.

W. L. Filmer Dead

The sudden death of W. L. Filmer, after a two week's illness, came as a very great shock to his host of friends in the Chicago territory. Mr. Filmer was one of the best known men in the industry in the midwest, having served for ten years as Chicago manager for Monsanto Chemical Works. Lately he had been associated with Walter H. Jelly & Co. He filled the office of Secretary-Treasurer for the Chicago Perfumery, Soap & Extract Association for five years and his untiring efforts won him the warm regards of all who came in contact with him. His popularity was attested by the vast number of condolences sent to his home. His death was caused by pneumonia, which developed rapidly from exposure following a slight cold. Brief services were held at his home at 5811 Maryland Avenue, on Sunday, December 30th and interment took place at Madisonville Kentucky on Wednesday, January 1st, where Mr. Filmer was born. His warm, expressive personality is indelibly imprinted in the memories of his friends.

Made by us since 1857
ETHER **U. S. P. for Anesthesia**

A quality product maintained by the careful painstaking supervision of able chemists.
Supplied in ¼ lb. and 1 lb. cans Only
The U. S. A. Pioneer Manufacturer

COOPER'S CERTIFIED CHEMICALS
The sign of well made chemicals

Charles Cooper & Co.
192 Worth Street
New York, N. Y.
Established 1857
Works: Newark, N. J.

ANYBODY

Can buy a good tooth paste

BUT

It takes skill and experience to make one

The successful manufacturer *wisely* builds upon his background of experience. He *knows* that the best formulae are at the mercy of the ingredients used.

The soap you use in a tooth paste (or any toilet preparation) must be correct physically and chemically.

Powco Neutral Powdered Soaps

manufactured primarily for dentifrices and toilet preparations are Laboratory Controlled, guaranteeing *consistent purity, uniformity of chemical and physical characteristics.*

A wide range of Neutral Soaps offers you a selective buying basis for your particular requirements.

Samples gladly submitted

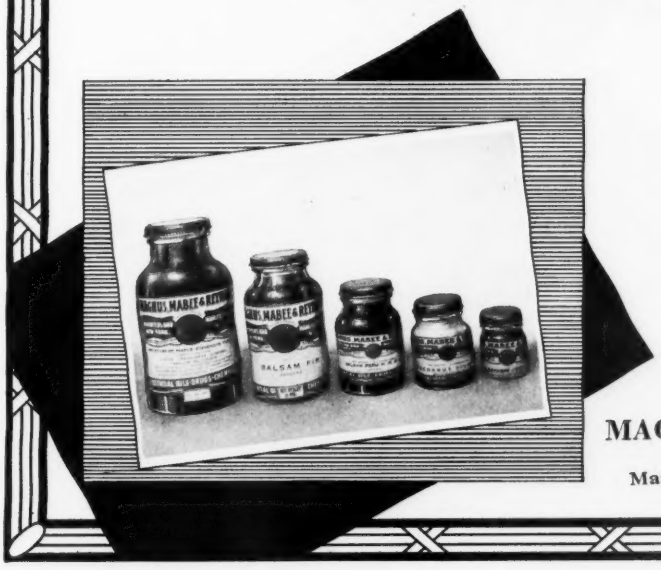
JOHN POWELL & CO., Inc.

114 EAST 32nd STREET **NEW YORK, N. Y.**

BALSAMS

Specializing in the importation and clarification of Balsams, adequate stocks are carried for your requirements. Our Balsams meet the requirements of the United States, British, Japanese and other Pharmacopoeias. May we talk over your requirements for 1930?

BALSAM COPAIBA USP
BALSAM COPAIBA PARA
BALSAM PERU NATURAL
BALSAM FIR CANADA
BALSAM FIR OREGON



Realizing our responsibility to the trade and that the greatest opportunity is before us, our organization will never be content merely to keep abreast of the times.

Through the constant study of the needs of the manufacturer and through research of the ways to improve manufacturing processes, we strive to keep our facilities for offering complete service a little in advance of actual requirements.

MAGNUS, MABEE & REYNARD, Inc.

Essential Oils, Balsams, Flavoring Materials

Main Sales Offices—32 Cliff St., New York City

LEAD ACETATE ★
has many uses in industry
IN THE manufacture of Dyes, Explosives, Glass, Ink, Insecticides, Leather, Metals, Paint, Varnish, Paper, Perfumery, Pharmaceuticals, and Textiles, LEAD ACETATE is an important factor. With the acquisition of the Dissoway Chemical Co., and the enlargement of our Lead Acetate plant, we now offer LEAD ACETATE in all quantities and grades at right prices. Let us have your inquiries . .
J. T. Baker Chemical Co.
Main Office and Works - Phillipsburg, N. J.
Branch Offices . . . New York and Chicago
★ One of
Baker's
Dependable Chemicals

Manufacturing Turnover

(*Continued from page 26*)

schedule has been established it becomes the duty of the production or factory manager to make certain that the various materials on schedule are produced at the proper time. In the preparation of his schedule he is forecasting; in supervising its fulfillment he is executing.

It is to be hoped that this inadequate sketch has limned the approaches to effective plant management. Subsequent articles will treat of specialized phases of the factory manager's problem.

Preserving Pills

(*Continued from page 31*)

this being due to the bacteria contained in the lycopodium. On the other hand, the pill mass itself, which lies close to the lycopodium coating and which had been preserved with methyl paraoxybenzoate, was not affected.

The practical result that can be deduced from this investigation is that if pills are to be protected against the growth of molds, the pill mass should be composed of Extra. Faecis spiss. or that a 0.3 per cent. solution of methyl paraoxybenzoate should be used. Furthermore, the pills should not be stored in closed glass bottles.

TERPINEOL C. P.

Fine odor--water white--an inexpensive perfume for soaps, sprays, disinfectants, and deodorizing blocks.

MENTHOL SYNTHETIC

Fine natural odor--white crystals. For lower costs in mentholating mouth washes, tooth pastes, shaving creams, etc.

Thymol U. S. P.
Pure White Crystals

Terpin Hydrate
U. S. P. Powdered and Crystals

Mustard Oil, Artificial
U. S. P.

Urea C. P.

Products of
Schering-Kahlbaum A. G.
Berlin

SCHERING CORPORATION 110 William Street New York, N. Y.

Sole Import and Sales Agents in the U. S. A. for the Manufacturers.

Stock Carried at New York

Patents Issued

(*Continued from page 32*)

Closures for Bottles and Collapsible Tubes

The collar of the closure is internally threaded and is adapted to be screwed on to the neck of the bottle or collapsible tube. A cap is drawn down to the opposite side of the neck as the collar is screwed on. The cap has arms oppositely arranged and pivoted to the collar. The cap can be maintained in various positions so that the mouth of the tube or bottle is open. The arms are resilient and have formed in their outer ends grooves which radiate from the pivots and are engaged by ribs on the collar to hold the cap either over the end of the neck or in position clear of it. As applied to a bottle, the neck member is inserted in a cork and the cork is secured in the bottle mouth. S. C. Endicott, Eugene, Oregon, British Patent No. 313,818, filed Sept. 7, 1928.

Unsaturated Esters

Unsaturated esters are prepared by heating to a suitable temperature one or more beta-hydroxy nitriles, or their derivatives such as amides, or beta-alkyloxy-compounds, with one or more alcohols and dehydrating agents in an acid medium. A small quantity of water may be present. In an example acrylic acid ester is prepared by heating ethylene cyanhydrin with methanol and sulphuric acid to about a temperature of 160° C. Rohm & Haas A. G., Darmstadt, Germany. British Patent No. 313,877, filed June 7, 1929.

Hormones

The hormones of the ovary and of the anterior lobe of the hypophysis are obtained from the placenta, or from dispersions or preparations of the latter, by extraction with an organic solvent such as methanol, removal of the solvent from the extract, extraction of the ovarial hormone from the residual liquor by means of ether, benzine, or like solvent, and precipitation of the hypophysis hormone from the residual liquor, for instance by slowly adding the liquor to alcohol. Alternatively the hypophysis hormone may first be precipitated and then, after concentration of the solution and taking up the residue in water the ovarial hormone extracted. Schering-Kahlbaum, A. G., Berlin, Germany. British Patent No. 313,923, filed June 18, 1929.

Hormones

The hormone of the anter or lobe of the hypophysis, which is also found in the blood, urine, faeces, male and female sexual glands, and placenta, is prepared by treating an aqueous preparation of these organs or liquids with a precipitant for salts and ballast materials, for instance with compounds of the alkaline earths or of the heavy metals, and then separating the hormone in the usual manner by adding an organic solvent to the residual aqueous solution. According to an example urine is concentrated, acidified with acetic acid, filtered, treated by addition of concentrated barium chloride solution to precipitate impurities, and the filtrate treated with sodium sulphate to remove excess of barium, again filtered, and treated with three times its volume of methanol to precipitate the hormone. The hormone may be further purified by repeated solution in water and precipitation with alcohols. Schering-Kahlbaum A. G., Berlin, Germany. British Patent No. 313,924, filed June 18, 1929.

Pyridine Derivatives as Drugs

Pyridine and piperidine derivatives containing the group CH_2COR in the alpha position or in the alpha-alpha' positions are subjected to catalytic hydrogenation, whereby one or both of the ketone groups is wholly or partially reduced, and the pyridine nucleus or one or both of the carboxylic residues (when R represents such) is hydrogenated, according to the reaction conditions. If desired, the reaction may be effected in stages with variation of the conditions in each stage. The starting

Abbott

Acriflavine Acid
Acriflavine Neutral
Benzocaine U S P
Berberine Sulphate Acid
Berberine Sulphate Neutral
Berberine Hydrochloride
Cinchophen U S P
Colchicine Alkaloid U S P
Hydrastine Alkaloid
Hydrastine Hydrochloride
Lobeline Sulphate
Neocinchophen
Podophyllin U S P
Powd. & Solid Extracts
Procaine Hydrochloride U S P

For quotations, please address

CHEMICAL SALES DEPARTMENT
ABBOTT LABORATORIES
NORTH CHICAGO, ILLINOIS

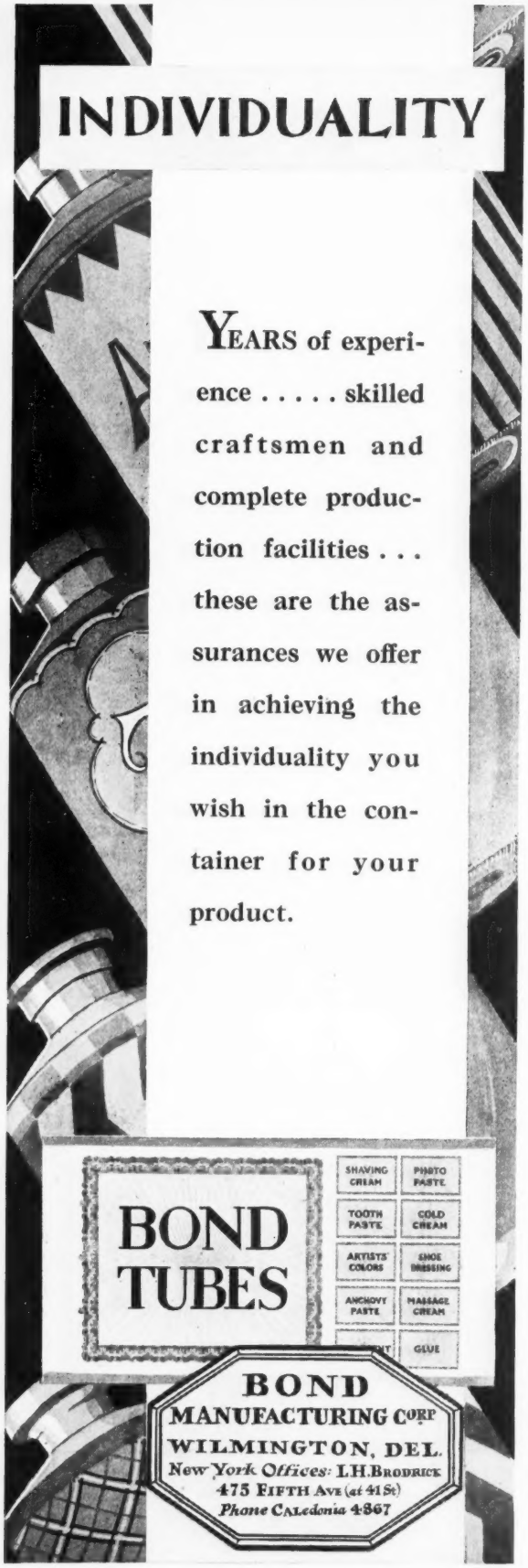
BORYSLAW OZOKERITE

REFINED
and
DOUBLY REFINED

The best wax for Cosmetics and Salves

THE TRADE MARK ON EVERY CAKE IS A GUARANTY OF 100% PURITY

KELSEY-RISDEN CO., Inc.
692 GREENWICH ST., NEW YORK, N. Y.


INDIVIDUALITY
YEARS of experience . . . . . skilled craftsmen and complete production facilities . . . these are the assurances we offer in achieving the individuality you wish in the container for your product.
BOND TUBES
SHAVING CREAM
PHOTO PASTE
TOOTH PASTE
COLD CREAM
ARTISTS' COLORS
SHOE DRESSING
ANCHOVY PASTE
MASSAGE CREAM
GLUE
BOND
MANUFACTURING CORP
WILMINGTON, DEL.
New York Offices: L.H. BRODRICK
475 FIFTH AVE (at 41 St)
Phone CALedonia 4867

materials may also be substituted in the nitrogen atom, or they may contain other substituents such as amido groups and halogens. Catalysts mentioned are metals of the platinum group or their oxides, for example platinum, palladium, nickel and platinum oxide, which may be deposited on carriers, for example barium sulphate. The products that are obtained in this manner are useful therapeutically or for the manufacture of therapeutic substances, A. Boehringer, Ingelheim-on-Rhine, Germany British Patents No. 314,019 filed June 11, 1929.

Making Medicinal Emulsions

Aqueous emulsions of mineral or vegetable oils or fats or fatty acids, which may be employed in the manufacture of medicinal preparations are prepared by the use, as emulsifying agents, of esters of organic acids, or their substitution products, with oxyamines or derivatives of the latter, or, with condensation products of mono or poylvalent alcohols, or their derivatives, with iso- or hetaro-cyclic amines. Emulsions of oils or fats prepared in this way are stated to have a stability unaffected by dilution, change of temperature or the actions of acids or lime. G. Schicht A. G., Aussig-on-Elbe, and E. Ulbrich, Schreckenstein, near, Aussig-on-Elbe, Czecho-slovakia. British Patent No. 314,072, filed June 17, 1929.

GERMAN PATENTS

Iodine Containing Alcoholic Extracts from Sponges

The sponges are treated with inorganic bases either before or after they are put through a roasting process. Thereafter the mass is extracted with alcohol. W. Haegele, Stuttgart, Germany. German Patent No. 474,820, filed June 26, 1926.

Non-Hardening Tooth Paste

The tooth paste is made in such form that it does not harden. It consists of an suspension of essentially anhydrous magnesium hydroxide in glycerin. E. R. Squibb & Sons, New York, N. Y. German Patent No. 475,114, filed Nov. 13, 1924.

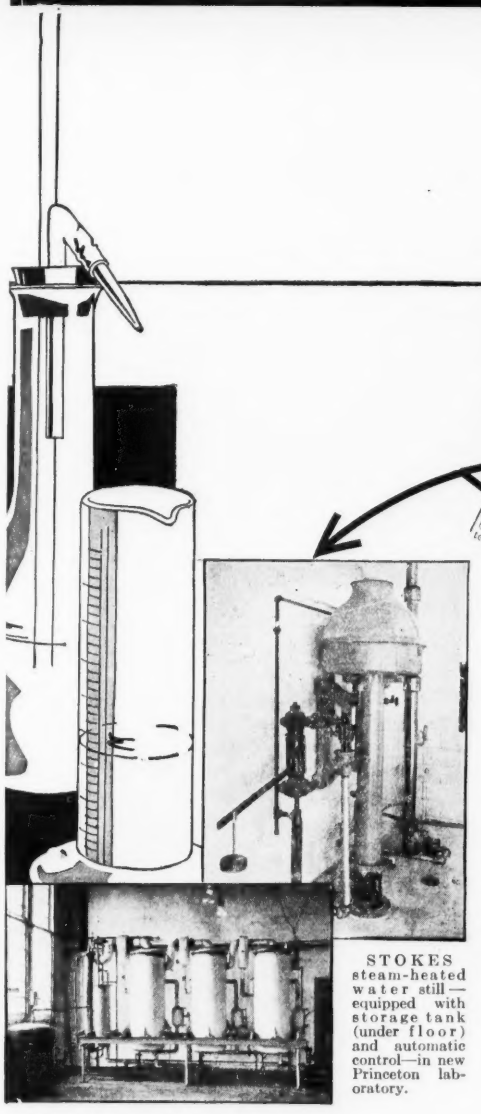
Sodium Bisulphate Disinfectant

Salt cake is mixed with ground "vegetable ivory" (dried sap of the fruit of phytelephas marcrocarpa) so as to form an intimate mixture. In certain cases a very small proportion of a blue, water-soluble dyestuff is added to the mixture. Fluxo Products Co. Inc., Germany Patent No. 475,305, filed July 8, 1925.

Making Vanillin

Trichloromethylguaiacyl-carbinol is used as the starting point in the manufacture of vanillin. The aforementioned substance is subjected to saponification and oxidation. These two operations are carried out either simultaneously or one after the other. They are accomplished on the trichloromethylguaiacyl-carbinol in the

Phenylhydrazine
Hydrochloride CP. and Technical
Hydroxylamine
Hydrochloride CP. White Dry Cryst.
Acetamide
White Dry Cryst. C.P and Tech.
Ammonium Acetate CP.
American Chemical Products Co.
Manufacturing Chemists
7 Litchfield Street Rochester, N. Y.



SEPTEMBER 26, 1929

PRINCETON OPENS $1,500,000 'LAB'

Five Chemists of International Reputation Receive Honorary Degrees at Dedi...

100 Scr...

STOKES

Automatic Water Stills

...the principal; Chemistry ... Bodenstein; ... and James ... of the University of ... and Frederick George ... Fraser of Chemistry in the University ... Collège de France, Paris, ... scientists which formally opened ... one of the largest and best-equipped ... chemical laboratories in the United ... States, were impressive. More than ... hundred visiting scientists from Nas... Hall to the auditorium of the new ... building. Faculty members and trustees of Princeton also marched ...

STOKES steam-heated water still—equipped with storage tank (under floor) and automatic control—in new Princeton laboratory.

STOKES Triple Effect Water Still in plant of a large pharmaceutical manufacturer

Princeton's selection of a STOKES Water Still for *"one of the largest and best equipped laboratories in the United States"* is an endorsement on which all users of distilled water may rely with confidence.

The quality of YOUR product—if distilled water is used in its manufacture—is protected by the use of a STOKES Still.

Chosen because of:

Purity of distillate—see analysis below.
Economy of operation—⅛c per gallon (larger models).
Convenience—hang on wall bracket, easy to clean, etc.
Long life—many in continuous use 15 years.

STOKES
Pharmaceutical Equipment

Tablet Making Machines	Drug Mills and Mixers
Vacuum Pans and Dryers	Alcohol Recovery Apparatus
Molds of all Types	Tube and Jar Fillers
Powder Fillers	Jacketed Kettles
Drying Closets	Bottle Washers
Percolators	Conveyors
Water Stills	Special Machinery

Write for information

Consult us on your distilled water problem. Our years of experience should be valuable to you.

Write for new folder

Analysis of Product

Parts per 100,000

Total solids	0.35
Ammonia	0.005
Nitrites	none
Non volatile	0.30
Nitrates	none
Chlorides	0.128

FJS STOKES MACHINE COMPANY
Pharmaceutical Machinery since 1895
5932 Tabor Road, Olney P. O., Philadelphia, Pa.

PEPSIN
PANCREATIN
GLANDULAR DERIVATIVES

THE WILSON LABORATORIES

4221 So. Western Ave., Chicago, Ill.

also

816 First Ave., New York
23 S. Orianna St., Philadelphia
869 Folsom St., San Francisco
1220 W. Pico St., Los Angeles
826 Clark Ave., St. Louis

same aqueous solution. The reagent used in the oxidation process is a reducible compound of a heavy metal. I. G. Farbenindustrie A. G., Frankfurt-on-Main, Germany. German Patent No. 475,918, filed July 29, 1923.

Organic Arsenic Compounds

Arsines, which have the general formula $R.AsH_2$, are allowed to act on arsine oxides or arsine halides which have the general formulae R.AsO or R.AsHalogen/2. In the formulae R denotes any aliphatic, aromatic or heterocyclic radicle. The reaction takes place in the presence of small amounts of a reducing agent, such as hypophosphorus acid or salts of the latter acid. Schering-Kahlbaum A. G., Berlin, Germany. German Patent No. 475,937 filed July 23, 1925.

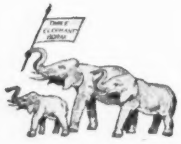
Anthraquinone Glucosides from Drugs Containing Them

This process is concerned with obtaining anthraquinone-glucosides, which are soluble in water, from drugs that contain them. The extracts that are obtained from these drugs by extraction with the aid of a solvent are treated with metal hydroxides. The filtrate obtained after filtration of the extract is evaporated to dryness. This is preferably carried out in a vacuum. I. G. Farbenindustrie A. G., Frankfurt-on-Main, Germany. German Patent No. 475,938, filed July 31, 1926.

New Disinfectant

The new disinfectant is made from monochloroxylenol mixtures or solutions of the same in water. These solutions or the monochloroxylenol mixtures are mixed with soaps and other solvents and dispersing media. Asphaltfabrik Rudow and Dr. W. Schliemann A. G., Berlin-Rudow, Germany. German Patent No. 475,947, filed March 11, 1927.

THREE ELEPHANT
BORAX
BORIC ACID



Stocks carried by the following distributors:

A. Daigger & Co., Chicago, Ill.
Detroit Soda Products Co., Wyandotte, Mich.
Arnold, Hoffman & Co., Providence, R. I. Philadelphia, Pa.
Thompson Hayward Chemical Company, Kansas City, Mo. St. Louis, Mo.
Marble Nye Co., Boston, Mass. Worcester, Mass.
Chemical Utilities Co., Cincinnati, O.
Innis, Speiden & Co., New York, N. Y.
Maryland Chemical Co., Baltimore, Md.
In Canada
St. Lawrence Trading Company, Ltd. Montreal, Toronto and Vancouver

American Potash & Chem. Corp.
WOOLWORTH BUILDING NEW YORK CITY

STANDARDIZED
DISINFECTANTS
For the Wholesale and Jobbing Trade

Phenol coefficients, 2 to 20.
Rich, milky emulsions,
Free from sediment or deposit.
Good clean, tarry odor.

Also headquarters for Cresol Compound, U. S. P. and Technical, Liquid Insecticides, Crude Carbolic Acid Cresylic Acid, Animal and Sheep Dips.

BAIRD & McGUIRE, Inc.
Manufacturing Chemists
HOLBROOK, MASS. ST. LOUIS, MO.
Warehouse stocks at convenient points.

Manufactured for seventy-three years

Pure and Dependable ETHER Of Uniform quality

SULPHURIC (Concentrated)

Supplied in {1 lb. 5 lb. 25 lb. cans and 300 lb. drums}

By the U. S. A. Pioneer Manufacturer

COOPER'S CERTIFIED CHEMICALS
The sign of well made chemicals

Charles Cooper & Co.
192 Worth Street
New York, N. Y.
Established 1857
Works: Newark, N. J.

Faster, Better Granulating At Lower Cost

Granulating is such an important operation in tablet manufacture, that you need the best equipment you can get.

Increased production capacity saves a lot of money and this machine will give it to you. In fact, it saves so much on production costs, its installation is usually paid for within ninety days.

The uniformly finer granulation obtained is easier on punches and dies, and makes the product more saleable.

Let us tell you more about the wonderful results obtained with the machine illustrated here. It produces a firm, even granulation for tablet work and is equally effective for effervescent salts.

Some users find it valuable for breaking down the dried granulation.

We make a complete line of pharmaceutical machinery. Write us for Catalogue No. 8.

SPECIFICATIONS

CAPACITY (sugar granulation per hour)..... 600 lbs.
POWER REQUIRED.....1½ H. P.
WEIGHT..... 130 lbs.
PRICE..... $185.00
Bands can be furnished with perforations from 3/64 to 1/4″

ARTHUR COLTON COMPANY

2620 East Jefferson Avenue **DETROIT, MICHIGAN**

Competition demands it

Modern competition demands that you give your product the most attractive and sales-winning form of package that can be devised.

Is your present package all that it might be? Does its appearance convey an impression of quality? Are the goods sufficiently protected against dust and moisture, so that they will reach the consumer in first-class condition?

We will be glad to assist you in improving your package. And at the same time, we may be able to lower your wrapping costs.

It will pay you to get in touch with our nearest representative.

Package Machinery Co.
SPRINGFIELD, MASSACHUSETTS
New York Chicago Los Angeles
London: Baker Perkins, Ltd.

PACKAGE MACHINERY COMPANY

Over 150 Million Packages per day are wrapped on our Machines

Have You Seen

"FILMASEAL"

(Trade Mark Reg.)

Admittedly the ideal closure

Regardless of how you are sealing your bottles now, if you are operating with automatic equipment using belt or chain conveyors, "FILMASEAL" will interest you.

Have you received your sample? If not, drop us a line.

FERDINAND GUTMANN & CO.

Bottle Closure Specialists Since 1890

Bush Terminal No. 19
BROOKLYN, N. Y.

Unauthorized use of name or invention will be prosecuted to the fullest extent.

"Standard of Quality Always"

PLYMOUTH

MEDICINAL WHITE OILS

Russian *Domestic*

COLD CREAM OILS

and

ALL RAW MATERIAL FOR TOILET CREAMS

STEARATES

ZINC ALUMINUM MAGNESIUM

Made Right *Priced Right*

M. W. PARSONS IMPORTS

AND

Plymouth Organic Laboratories

55 ANN STREET, NEW YORK

Antioxidizing Function and Phenolic Constituents of Essential Oils

This article is concerned with the anti-oxidizing function and the phenolic ingredients of essential oils and particularly with the action of the soluble ferments which are secreted by hymenomycetic fungi. Just as in the case of tannins, the question of the biological role of essential oils is not only obscure but also controversial. The work which was carried out by Charabot, Laloue and Hebert has shown that various constituents of essential oils, notably the alcohols, undergo during the course of the existence of the plant, certain constant modifications, principally oxidations and esterifications, which are at a maximum at the time that the plant blooms. Decreases in the percentage of the principal substances amongst these after blooming and during the formation of the seed lead to the assumption that a certain part at least of these essential oils is utilized in the manner of a reserve substance.

The author has subjected certain constituents of the essential oils to oxydo-reducing catalysts, which are contained in the living mycellia of hymenomycetic fungi with the idea of determining if the oxidizability of certain of these would be sufficient to cause actual anti-oxidizing agents to develop within the cell.

The technic of these tests consisted in incorporating selected substances in artificial media mixed with a reducible substance, such as methylene blue, whose changes in shade are moreover more rapid and more marked, as the substance under test is itself more strongly oxidized by the oxidases which are secreted by the inoculated fungi. The fungi used were those of Stereum, Purpureum, Stereum Hirsutum and Coriolus Versicolor.

When the substance possesses one or two free hydroxyl groups, then the reduction of methylene blue is considerably accelerated. Creosol in particular reacted with marked intensity. Substances such as methyl salicylate, which possesses a free hydroxyl group, behave like non-esterified phenols and appreciably accelerates the reducing reactions.

In general the phenolic constituents of essential oils, as long as their phenolic functions are not esterified, behave like ordinary phenols as far as the oxydo-reducing action effected by the soluble ferments secreted by the hymenomycetes is concerned. L. Lutz, Comtes rendues Academie des Sciences, volume 189, number 1, 1929.

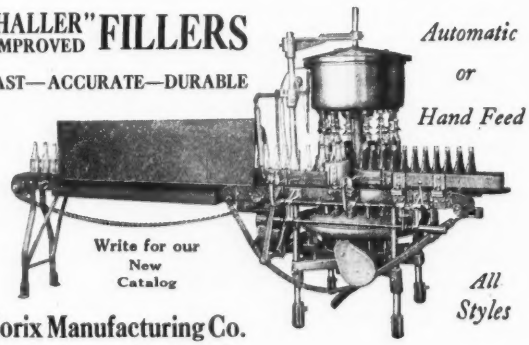
New Eczema Remedy

Preparation is known as Hirisan cream. It can be used with good results in the treatment of all kinds of skin diseases, eczemas of children, occupational eczemas, and the like. The effectiveness of the preparation is claimed to be due to the favorable combined action of oleic and fatty acids in combination with zinc and tar preparations. Med. und Pharm. Runschau, volume 25, VIII, 1929, pages 10ff.

"HALLER" IMPROVED FILLERS

FAST—ACCURATE—DURABLE

Automatic or Hand Feed



All Styles

Horix Manufacturing Co.

Corliss Station :: Pittsburgh, Pa.

GOOD MIXING
Gives Better Quality

Good mixing is a prime factor in producing a better product.

"Lightnin" mixers are designed to speed up production, lower mixing costs and insure a thoroughly uniform mix.

THOUSANDS IN USE

PATENTED

LIGHTNIN

PORTABLE
MIXERS

MIXING EQUIPMENT COMPANY, Inc.

ORIGINATORS AND WORLD'S LARGEST MANUFACTURERS
OF PORTABLE ELECTRIC MIXERS

1034 GARSON AVENUE : : ROCHESTER, N. Y.

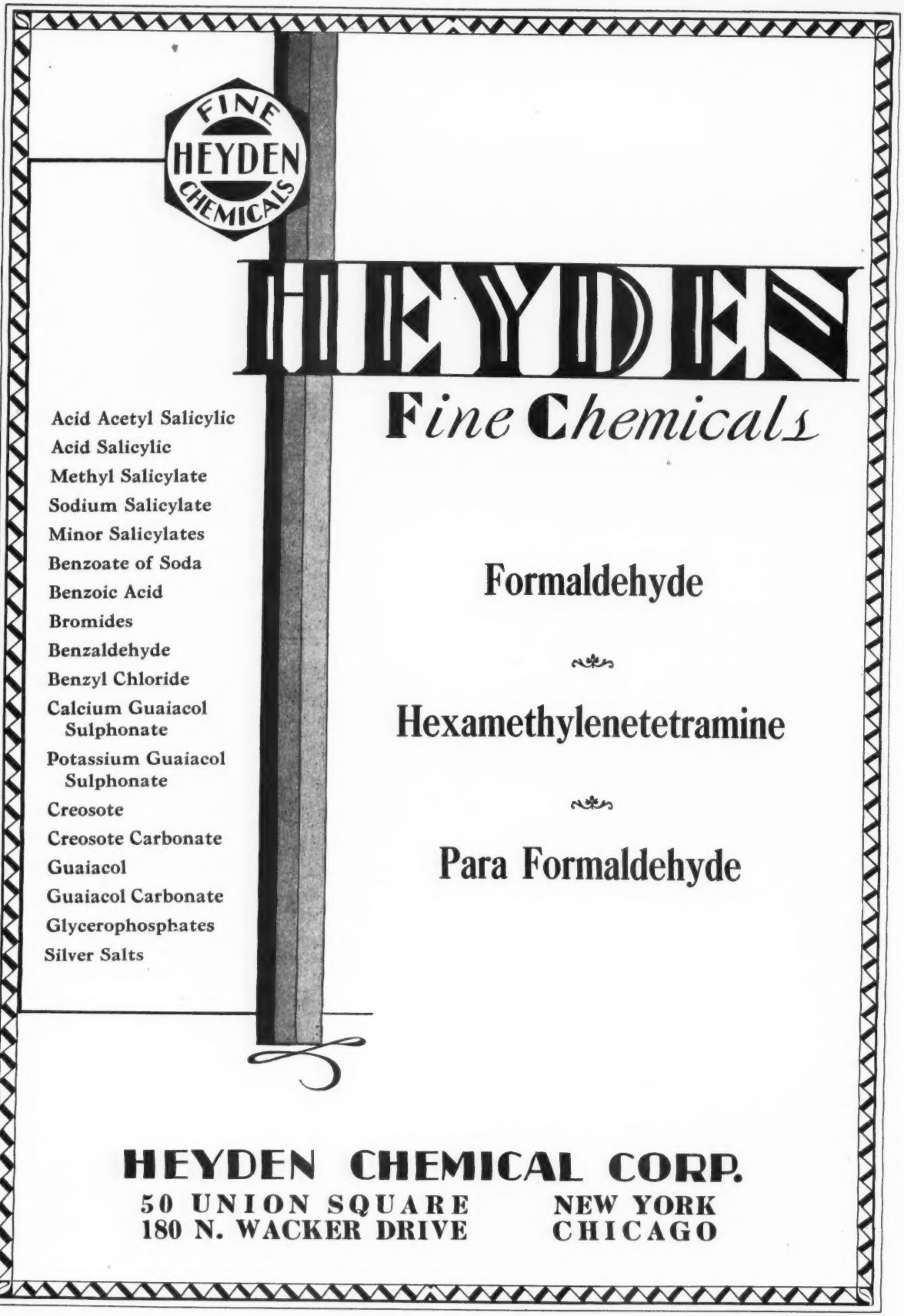
Belt Conveyor Packaging Tables

WORK in your finishing department can be speeded up—production costs cut—factory space saved—with Belt Conveyor Packaging Tables. They provide for an orderly arrangement of the work to be done and insure production according to schedule.

¶ Write for catalog of Kiefer Conveyors—the conveyors with belts that always run true and smooth; with substantial work tables of well seasoned hard wood, firmly supported; with adjustable feet to take up any unevenness in the floor; conveyors that can be easily moved about and conveniently increased in length if desired.

THE KARL KIEFER MACHINE COMPANY

CINCINNATI, OHIO


FINE
HEYDEN
CHEMICALS
HEYDEN
Fine Chemicals
Acid Acetyl Salicylic
Acid Salicylic
Methyl Salicylate
Sodium Salicylate
Minor Salicylates
Benzoate of Soda
Benzoic Acid
Bromides
Benzaldehyde
Benzyl Chloride
Calcium Guaiacol Sulphonate
Potassium Guaiacol Sulphonate
Creosote
Creosote Carbonate
Guaiacol
Guaiacol Carbonate
Glycerophosphates
Silver Salts
Formaldehyde
Hexamethylenetetramine
Para Formaldehyde
HEYDEN CHEMICAL CORP.
50 UNION SQUARE NEW YORK
180 N. WACKER DRIVE CHICAGO

Prices Current

Medicinal, Aromatic, and Photographic Chemicals, Crude Drugs, Spices, Essential Oils and Concentrates, Miscellaneous Raw Materials, etc.

Chemical prices quoted are of American manufacturers, spot New York, f. o. b. for immediate shipment, unless otherwise specified.

Products sold f. o. b. works are so specified. Imported chemicals are so designated. Resale stocks, when a market factor, are indicated "second hand."

Crude Drugs and Essential Oils are quoted f. o. b. New York (Manhattan with limitations) for immediate shipment.

The range of price given is not "bid and asked," but are prices of different sellers, based on varying grades and/or quantities. Containers named are original packages most commonly sold.

Acetanilid
Ammonium Valerate

Chemicals

Monthly Review

Alcohol Schedule Higher

Denatured alcohol price schedules have been released December 16. Effective as of January 1, and distillers are now offering contracts for all grades of alcohol for delivery through 1930 or any part thereof.

Completely denatured alcohol formula No. 5 is used as the basis for computing the price of all the other formulae, the difference in the cost of the various denaturants being added to the cost of the alcohol in this formula.

The prices are higher than those of last year, due to the higher cost of raw material. As the distillers are still working on molasses bought in 1929 the sliding scale feature of previous schedules has been retained. This will enable the distillers to absorb part of the higher cost of raw material in the early months of 1930 with the price increasing as the higher priced molasses is brought into production.

The schedule of prices for the basic formula, for various quantities in a single delivery, are as follows:

Zone A
Cents per gallon

Drums	*Jan. Feb.*	*Mar. Apr. May*	*June*	*July Aug.*	*Sept.*	*Oct. Nov. Dec.*
1 to 4	58	59	60	61	62	63
5 to 9	56	57	58	59	60	61
10 to 19	54	55	56	57	58	59
20 to 64	53	54	55	56	57	58
Car lots	50	51	52	53	54	55
Tanks	48	49	50	51	52	53

Barrels are charged for extra at the rate of 7c per gallon. On drums a deposit of $6 is required which is refunded when the empty drum is returned.

Menthol is quoted at $4.35 and $4.50 with the market reported as dull. There is only moderate stocks on hand, however, but aside from contract commitments shipments have been meagre. The situation in Japan, however, has been encouraging in that quotations for shipment have been well maintained. A buyer's market has prevailed in menthol for some time now. Unless colder weather should prevail and so stimulate demand for this product, the conditions outlined above will probably continue.

Glycerine remains unchanged in price with the market reported dull with demand routine. Price is quoted at 14c per lb. and this price can undoubtedly be shaded. The undertone of the market is none too strong but, as one dealer expressed it, "as good as can be expected so soon after the turn of the year." Lower prices are looked for as the new year progresses.

	Current Market		1929 High	1929 Low	1928 High	1928 Low
Acetanilid, USP, 200 lb bbls..lb.	.36	.37	.37	.36	.37	.28
Acetone, pure 350 lb drs wks..	.14	.14½	.19	.14	.18	.14
Acetphenetidin, 225 lb bbls..lb.	1.25	1.30	1.35	1.25	1.40	1.25
ACID, Acetylsalicylic, 225 lb ....bbls.	.85	.90	.90	.85	.90	.85
Agaric, 1 oz vials.....oz.	.....	3.50	3.50	3.50	3.50	3.50
Arsenous, USP, 220 lb bbls lb.	.....	.18	.18	.18	.18	.18
Benzoic, USP, 100 lb bbls.lb.	.60	.61	.61	.60	.61	.60
Boric, 300 lb bbls.....lb.	.09½	.10	.10½	.07½	.12	.11
Cacodylic, 5 lb. bot.....lb.	.....	8.00	8.00	8.00	8.00	8.00
Camphoric, USP, VIII 1 lb bot.....lb.	4.82	4.82	4.82	4.82	4.82	4.82
Carbolic, USP, crys 112 lb tins.....lb.	.17	.18	.19	.14	.21	.14
Cinnamic, 5 lb cans.....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Citric, USP, crys 230 lb bbl .....lb.	.....	.46	.46	.46	.46	.44½
USP, crys imp. 112 lb keg .....lb.	.59	.61	.61	.59	.61	.55
USP, powd 200 lb bbl...lb.	.....	.47	.47	.47	.47	.45½
Diethylbarbituric, 1 lb bot lb.	.....	4.60	4.60	4.60	4.60	4.60
Gallic, USP, 150 lb bbls..lb.	.....	.74	.74	.74	.74	.74
Glycerophosphoric, 25% 1 lb bot.....lb.	1.40	1.75	1.75	1.40	1.45	1.40
Hydriodic, USP, 10% 5 lb bot.....lb.	.....	.80	.80	.80	.80	.80
Hydrobromic, USP, 40% 155 lb. cbys.....lb.	.....	.55	.55	.55	.55	.55
Hypophosphorous, USP, 30% .....lb.						
5 gal demis.....lb.	.....	.85	.85	.85	.85	.85
Lactic, USP, VIII 100 lb cbys lb.....	.56	.62	.62	.56	.62	.56
USP, X 100 lb cbys.....lb.	.62	.64	.64	.62	.64	.62
Phenylcinchonic.....lb.	.....	4.50	4.50	4.50	4.50	4.50
Phosphoric, USP, Syr 70 lb drs.....lb.	.14	.15	.15	.14	.16	.14
Pyrogallic, crys 5 lb cans...lb.	1.40	1.50	1.50	1.40	1.50	1.40
Resublimed, 5 lb cans...lb.	1.80	1.85	1.85	1.80	1.85	1.80
Salicylic, USP, 100 lb bbls.lb.	.39	.40	.40	.39	.41	.40
Succinic, 100 lb bbls.....lb.	.....	1.35	1.35	1.35	1.35	1.35
Sulfurous, USP, 6% 100 lb cbys.....lb.	.05	.06	.06	.05	.06	.05
Tannic, USP, fluffy 50 lb bbls. .....lb.	.85	.90	.93	.85	.93	.87
Powd 200 lb bbls.....lb.	.80	.85	.85	.80	.85	.80
Tartaric, USP, 300 lb bbls.lb	.37½	.38½	.38	.37½	.38	.35
Aconitine, Alk, crys 1 oz vials .....oz.	.....	30.00	30.00	30.00	30.00	30.00
Amorphous, 1 oz vials....oz.	.....	20.00	20.00	20.00	20.00	20.00
Adeps Lanae, hyd 350 lb bbls lb.	.15	.16	.16	.15	.16	.15
Anhydrous, 350 lb bbls....lb.	.16	.18	.18	.16	.19	.16
Agaricin, 1 oz vis incl.....oz.	.....	2.32	2.32	2.32	2.32	2.32
ALCOHOL, Benzyl, 5 lb bot lb.	1.25	1.35	1.35	1.25	1.55	1.25
Ethyl, USP, 190 pf 50 gal bbls.....gal.	2.69½	2.79½	2.79½	2.69½	2.79½	2.66½
Pure tax free.....gal.	.61	.69	.69	.61	.77	.54
Grain drums.....gal.	2.69	2.79	2.79	2.69	4.00	2.67
Denatured, drums add 7c for bbls.....						
No. 1 spec.....gal.	.49	.57	.60	.47	.55	.43
1 comp.....gal.	.51	.59	.61	.48	.56	.44
No. 5 comp.....gal.	.50	.58	.60	.47	.56	.44
23 a, spec.....gal.	.50½	.58½	.61½	.48½	.68	.43½
39 b, spec.....gal.	.51½	.62½	.71	.51½	.71	.56
40 m. spec.....gal.	.47	.58	.66½	.47	.66½	.51½
Isopropyl refd 98-99% drs .....gal.	1.25	1.50	1.50	1.25	1.50	1.25
Phenylethyl, 1 lb bot.....lb.	8.00	10.00	10.00	8.00	10.00	8.00
Aloin, USP, 100 lb cases....lb.	1.90	1.95	1.95	1.25	1.30	.90
Aluminum Acetotartrate kegs .....lb.	...	1.60	1.60	1.60	1.60	1.60
Amidipyrine, 10 lb boxes....lb.	4.25	4.45	4.45	4.25	4.75	4.25
AMMONIUM, Acetate 100 lb kegs.....lb.	.38	.40	.40	.30	.38	.34
Benzoate, USP, 1 lb bot...lb.	.....	1.27	1.27	1.27	1.27	1.27
Borate, 10 lb bot.....lb.	.....	.35	.35	.35	.35	.35
Bromide, USP, 450 lb bbls.lb.	.47	.49	.50	.47	.50	.48
Imported, 112 lb boxes..lb.	.48	.50	.50	.48	.50	.48
Carb, USP, lump 100 lb kegs .....lb.	.....	.13½	.13½	.13½	.13½	.13½
USP, powd 100 lb kegs..lb.	.....	.14½	.14½	.14½	.14½	.14½
Citrate, 100 lb kegs.....lb.	.85	.90	.90	.85	.90	.85
Ichthyolate, as to brand..lb.	4.00	4.50	4.50	4.00	4.50	4.00
Iodide, USP, 25 lb jars...lb.	.....	5.20	5.20	5.20	5.20	5.20
Phosphate, dibasic 250 lb bbls .....lb.	.48	.50	.50	.43	.48	.43
Salicylate, USP, 100 lb kegs .....lb.	1.15	1.20	1.20	1.15	1.20	1.15
Valerate, USP, 25 lb jars...lb.	2.75	2.90	2.90	2.75	2.90	2.75

{ Monthly Review }

Production of Iodine in Italy

There are only five producers of iodine in Italy. Of these only two make crude iodine, and this in comparatively small quantities. Italian producers of crude iodine are the Soc. Anon. Regie Terme di Salsomaggiore, Salsomaggiore, and the Instituto Chimico-Farmaceutico Militare, Turin, the former deriving the iodine from the mother liquors of the salso-bromo-iodic mineral water of Salsomaggiore, and the latter recovering the iodine from the waste water of the sterilization baths of the Institute.

Three firms produce sublimated iodine:—Carlo Erba of Milan, Fabbrica Lombarda Prodotti Chimici of Milan and Soc. Anon. Fumagalli, Parma. Production of crude iodine is small. Statistics show that Italy also imports crude iodine which is then refined for the pharmaceutical trade. Production of crude and resublimated iodine from 1924 to 1927 was as follows:

Year	Crude Pounds	Resublimated Pounds
1924	.....	24,685
1925	.....	26,448
1926	8,816	29,754
1927	7,934	16,530

Imports of crude and refined iodine during the past four years were as follows:

	Crude Pounds	Refined Pounds
1926	61,492	9,477
1927	44,962	12,342
1928	42,978	16,310
1929 (6 Mos.)	29,313	9,036

No crude iodine is exported, while exports of refined iodine are negligible, having amounted to 1,543 pounds in 1928 and nothing in 1929. (Trade Commissioner E. Humes, Rome).

Camphor Continues Dull

Camphor remains inactive and without price change. Quotations are made at 63c and 64c per lb. for Japanese refined slabs. There is a distinct lack of demand at present with a buyer's market prevailing. Demand is not expected to increase for several months. The crude peppermint oil production for this year is estimated at 921,240 pounds, an increase of 127,320 pounds over the actual crop of 1928. This would naturally result in an increase in the supply of refined camphor and is one reason why the market is weak.

A constantly increasing market for crude camphor, however, is being developed in the widely increased use of non-shatterable glass. Camphor is used in making the transparent celluloid sheet placed between two layers of glass to make this form. The type of crude camphor is known as "BB" but whether the increased use of this grade will decrease the production of refined and so strengthen the market greatly remains undetermined.

Camphor in tablet form is constantly enjoying a wider sale. The market is 76c to 77c per lb. Drug stores in the East, especially the chain stores, are now featuring camphor tablets over the well known camphor balls and the demand for household use seems to favor this form. The situation abroad is unchanted with the monopoly holding the price at present levels in the primary market.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Amylene Hydrate, 1 lb bot..lb.	.....	7.10	7.10	7.10	7.10
Antipyrine, USP, 100 lb cans.lb.	2.65	3.00	3.00	1.53	1.75	1.53
Apomorphine Hydrochloride, ½ oz. vials.....oz.	22.60	22.70	22.70	22.60	35.80	22.60
Arecoline Hydrobrom, 1 oz vials .....oz.	7.75	8.75	8.75	7.75	11.45	7.75
Aspidospermine Amorphous..oz.	.....	15.00	15.00	15.00	15.00	15.00
Atropine Alk, USP, 1 oz. vials .....oz.	7.00	9.10	9.10	7.00	9.10	9.10
Methyl bromide, 1 oz vials.oz.	.....	25.00	25.00	25.00	25.00	25.00
Sulfate, 5 oz cans.....oz.	.....	3.00	3.00	3.00	3.00	3.00
Single ounce.....oz.	.....	3.15	3.15	3.15	3.15	3.15
Barium Iodide, 5 lb box.....lb.	.....	5.15	5.15	5.15	5.15	5.15
Sulfate, X-ray diagn bbls..lb.	.09½	.10	.10	.09½	.10	.09½
BAY RUM Porto Rico, 45 gal. bbls.....gal.	.85	.90	.90	.85	.90	.80
Domestic syn. 50 gal bbl..gal.	.70	.75	.75	.70	.75	.65
St. Thomas, 50 gal bbls...gal.	.80	.90	.90	.80	.90	.80
Benzonaphthol, 5 lb boxes...lb.	2.50	2.60	2.60	2.50	2.60	2.50
Benzoyl Cholride, 500 lb dr..lb.	.....	1.00	1.00	1.00	1.00	1.00
Benzyl Benzoate, Medicinal FFC.....lb.	.....	1.40	1.40	1.40	1.40	1.40
Chloride Redis, 160 lb cby.lb.	.30	.35	.35	.30	.35	.30
Formate, 1 lb bot.....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Succinate, 160 lb cby.....lb.	.....	5.25	5.25	5.25	5.25	5.25
BISMUTH, metal 100 lb cases .....lb.	.....	1.70	1.70	1.70	2.25	1.70
Ammon. Citrate, USP, 5 lb cans.....lb.	.....	5.50	5.50	5.50	5.65	5.50
Betanaphtholate, 5 lb box.lb.	.....	3.10	3.10	3.10	3.35	3.10
Citrate, USP, 5 lb cans....lb.	.....	2.75	2.75	2.75	2.95	2.75
Chloride.....lb.	.....	3.15	3.15	3.15	3.40	3.15
Hydroxide.....lb.	.....	3.05	3.05	3.05	3.30	3.05
Nitrate, 25 lb jars.....lb.	.....	1.80	1.80	1.80	1.95	1.80
Oxide anhydrous.....lb.	.....	3.40	3.40	3.40	3.70	3.40
Oxychloride, 25 lb boxes...lb.	.....	3.10	3.10	3.10	3.35	3.10
Salicylate, 25 lb boxes.....lb.	.....	1.80	1.80	1.80	1.95	1.80
Subcarbonate, USP, 25 lb boxes.....lb.	.....	2.20	2.20	2.20	2.70	2.20
Subcarbonate, X-ray diag 1 lb. bot.....lb.	.....	3.45	3.45	3.45	3.65	3.40
Subgallate, USP, 25 lb boxes .....lb.	.....	2.50	2.50	2.50	2.70	2.50
Subiodide, 5 lb lots.....lb.	.....	4.25	4.25	4.25	4.40	4.20
Subnitrate, USP, 25 lb jar.lb.	1.58	1.60	1.65	1.58	2.30	1.60
Subsalicylate, USP, 25 lb boxes.....lb.	.....	2.90	2.90	2.90	3.15	2.90
Tannate.....lb.	.....	2.65	2.65	2.65	2.65	2.45
Borax, crys USP, 400 lb bbls.lb.	.....	.06	.06	.03½	.05	.03½
Bromoform, USP, 5 lb bot cases .....lb.	1.65	1.90	1.90	1.65	1.90	1.65
Butylchloral Hydrate bot....lb.	4.00	5.00	5.00	4.00	5.00	4.00
Cadmium iodide, 10 lb bot...lb.	.....	4.55	4.55	4.45	4.55	4.45
CAFFEINE Alk, USP, 1..... 100 lb kegs.....lb.	2.75	2.80	2.95	2.75	3.20	2.80
Citrated, 50 lb cans.....lb.	2.35	2.60	2.60	2.00	2.25	2.00
Hydrobromide, 1 lb bot...lb.	4.80	5.00	5.00	4.80	5.00	4.65
Hydrochloride, 1 lb bot...lb	6.05	6.55	6.55	6.05	6.55	6.05
Sulfate, 1 lb bot.....lb.	5.40	5.90	5.90	5.40	5.90	5.40
Sodium Benzoate, tins....lb.	.....	3.05	3.05	3.05	3.05	3.05
Salicylate, tins.....lb.	.....	2.95	2.95	2.95	2.95	2.95
Calcium Bromide, 100 lb cs..lb.	.....	.60	.60	.60	.60	.60
Carb, USP, 175 lb bbls....lb.	.04½	.06½	.06½	.04½	.06½	.04½
Glycerophos, 250 lb bbls...lb.	.....	1.40	1.40	1.40	1.40	1.40
Hypophos, USP, 25 lb cans lb.	.60	.65	.65	.60	.65	.60
Iodide, 5 lb bot.....lb.	.....	4.35	4.35	.35	4.35	4.35
Lactate, USP, 500 lb bbls lb.	.45	.50	.50	.45	.50	.45
Lactophosphate Soluble...lb.	.....	1.20	1.20	1.20	1.20	1.20
Powdered tins.....lb	.....	1.00	1.00	1.00	1.00	1.00
Insol, powd tins.....lb.	.....	.50	.50	.50	.50	50
Sulfide, USP, 100 lb drs...lb.	.21½	.24	.24	.21½	.25	20
CAMPHOR, Jap. ref. slabs 100 lb. cases.....lb.	.63	.64	.64	.59½	.66	.57
Refined powd.....lb.	.65	.66	.66	.63	.70	.62
½ oz tab, 100 lb cases....lb.	.76	.77	.77	.73	.75	.68
Liniment, bbls.....gal.	2.20	2.30	2.30	2.20	2.30	2.20
Monobrom, 100 lb cases...lb.	1.85	1.90	1.90	1.85	1.90	1.85
Casein edible, 100 lb kegs...lb.	.45	.55	.55	.45	.55	.45
Charcoal Animal medicinal jars incl.....lb.	.....	.50	.50	.50	.50	.50
Charcoal Wood, powd, 100 lb. bbls.....lb.	.05½	.06	.06	.05½	.06	.05½
Chloroform, USP, 50 lb drs...lb.	.25	.27	.30	.25	.30	.28
Chloral Hydrate, USP, 25 lb jars.....lb.	.75	.80	.80	.75	.80	.70
100 lb drums.....lb.	.55	.60	.75	.70	.75	.65
Cholesterin.....oz.	5.50	5.85	5.85	5.50	5.85	4.00
Chromium Sulfate Scales, tins .....lb.	.55	.60	.60	.55	.60	.55
Powdered tins.....lb.	.60	.65	.65	.60	.65	.60
Chrysarobin, 50 lb tins.....lb.	3.75	4.10	4.25	3.75	4.25	3.65
Cinchonine Alk, 100 oz tins.oz.	.....	.38	.38	.38	.38	.38
Crystal.....oz.	.43	.46	.68	.65	.68	.65
Sulfate, 100 oz tins.....oz.	.....	.25	.25	.25	.25	.25
Cinchonidin Sulfate, 100 oz tins .....oz.	.35	.35	.35	.35	.35	.35
Cocaine Alk, USP, 1 oz vial..oz.	.....	11.07	11.07	11.07	11.07	11.07
Hydrochloride, USP.....oz.	.....	8.50	8.50	8.50	8.50	8.50
CODEINE Alk, 1 oz vials, 10 lots.....oz.	.....	11.87	11.87	10.37	10.37	10.37
Hydrobromide.....oz.	.....	8.92	8.92	7.42	7.92	7.42
Hydrochloride.....oz.	.....	10.87	10.87	9.37	9.87	9.37
Nitrate, oz vl 10 oz lots....oz.	.....	9.80	9.80	8.30	8.80	8.30
Phosp. oz vl, 10 oz lots....oz.	.....	9.42	9.42	7.92	8.42	7.92
Salicylate.....oz.	.....	8.25	8.25	6.75	7.25	6.75
Sulfate, oz vl, 10 oz lots...oz.	.....	9.67	9.67	8.42	8.92	8.42

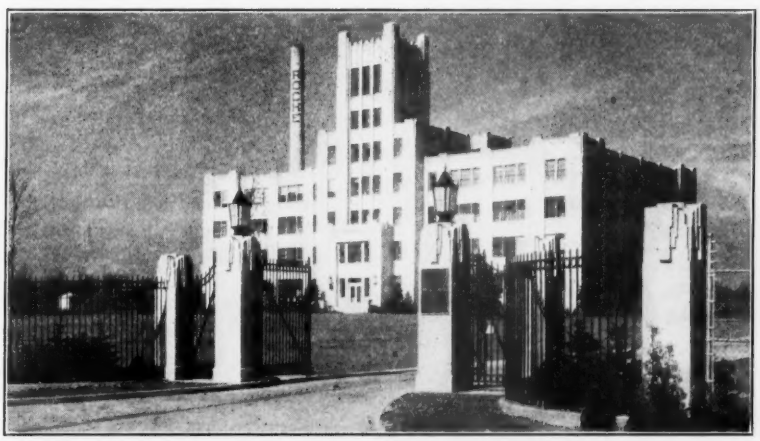
'Roche' Fine Chemicals

BARBITAL

QUININE and SALTS

SAPONIN

Arecoline
Atropine
Brucine
Quinidine
Cinchonine
Cinchonidine
Colchicine
Digitalin



Emetine
Eserine
Hyoscine
Guaiacol
Homatropine
Sparteine
Yohimbine
Hydrastine

Hoffmann-LaRoche, Inc.

Makers of Medicines of Rare Quality

NUTLEY :: :: NEW JERSEY

{ *Monthly Review* }

Cod Liver Oil Holds

Cod Liver Oil is firm at $29.00 per barrel for Norwegian with the foreign situation reported as very satisfactory from the standpoint of stocks on hand. A small carryover is expected.

The new fishing season, which has been held up by severe storms in the north, is now getting under way and reports of the first catch will be looked for with much interest. A four year cycle is said to prevail in the cod fishery, with every fourth year producing an exceptionally large catch. Last year an exceptional amount of cod were caught with the three previous years being but normal. If this holds true the coming season should be but moderate as to amount of fish brought in. Of course, the number of cod caught does not always indicate the amount of oil to be obtained as the livers may run small or very fat and so upset any possible calculations.

Camphor Imports Increase

Camphor, tragacanth, and gum arabic imports for ten months, 1929. The table below reveals many changes in the 1929 (10 months) imports of gums, resins, and balsams. The three camphors have an increased value of approximately $900,000. Balsams show a decrease of approximately 2,000 pounds but were valued at $30,000 more. Gum arabic has decreased by approximately 360,000 pounds, but import values have increased approximately 27 per cent., or $193,000. There is an increase of approximately 160,000 pounds of gum tragacanth, with a decrease of $47,000 in value. The quantity and value are shown in the following table:

	10 Months, 1928		*10 Months, 1929*	
	Pounds	*Value*	*Pounds*	*Value*
Camphor:				
Natural, crude	3,639,000	$1,381,000	3,770,000	$1,408,000
Natural, refined	897,000	450,000	1,286,000	711,000
Synthetic	1,458,000	525,000	3,265,000	1,165,000
Balsams, crude	347,000	165,000	346,000	194,000
Gum arabic	8,726,000	696,000	8,365,000	889,000
Gum Tragacanth	1,491,000	757,000	1,652,000	711,000
Other gums and resins, n.e.s.		1,070,000		729,000

Gum Arabic Weakens Further

Gum arabic continues weak in the spot market with stocks being freely offered. Amber sorts is quoted at 20c to 22c per lb., a decline of 4c per lb. during the past month. New crop stocks are coming in more freely in the Sudan and dealers in this market seem to be determined to clear up as much of their old crop stocks as possible.

There is an interesting situation in the primary market however. In spite of a falling market here and an increase in arrivals in the Sudan, price there has risen ½c per lb. This is undoubtedly due to the fact that some buyers who have been holding off awaiting lower figures have placed definite business at the prevailing market for shipment causing this increase. This, in the opinion of several dealers here, is a temporary condition and the opinion prevails that prices in the primary market will be easier. The quality of the crop arriving at this writing is not particularly good and it is yet too early to tell definite production trend but an early prognostication would be that supplies will be plentiful.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Colchicino Alk, USP, 1 oz vl.	oz.	20.00	20.00	20.00	20.00
Salicylate, 1 oz vls.	oz.	35.50	35.50	35.50	35.50
Cream Tartar, USP, 300 lb bbls	lb. .27½	.27½	.28	.26½	.28	.26
Imp. powd. 224 lb bbls.	lb. .25½	.25½	.27	.25½	.27½	.25½
Creosote, USP, 42 lb cbys.	lb. .40	.42	.42	.40	.42	.40
Carbonate, 150 lb.	lb. 1.50	1.60	1.60	1.50	1.60	1.50
Cresol, USP, 400 lb drums.	lb.	.20	.20	.20	.20	.20
500 lb drums.	lb.	.20	.20	.20	.20	.20
DIGITALIN Pure, 1 oz vial.	oz 15.00	15.50	15.50	15.00	15.50	15.00
Dover's Powder, USP, 5 lb tin	lb. 2.45	2.50	2.50	2.45	2.50	2.45
Duboisine Sulfate, 1 oz vl.	oz.	30.07	30.07	30.07	30.07	30.07
Emetine Alk, 15 gr vial.	oz.	.85	.85	.85	.85	.85
Hydrochloride, USP, 1 oz vl	oz. 35.00	36.00	36.00	35.00	36.00	35.00
15 grain vials.	oz. 2.50	2.70	2.70	2.50	2.70	2.50
Epsom Salts, USP, 200 lb bbls	100 lb. 2.25	2.50	2.50	2.25	2.50	1.85
Imp. 100 lb bbls.	100 lb. 1.95	2.00	2.00	1.95	2.00	1.95
Ergotin Bonjean, 1 lb jars.	lb. 18.50	19.00	19.00	18.50	21.00	15.25
Eserine Alk, 1 oz vials.	oz.	50.00	50.00	50.00	40.00	40.00
Salicylate, 1 oz vials.	oz.	40.00	40.00	40.00	40.00	40.00
Sulfate, USP, VIII 1 oz vials	oz.	40.00	40.00	40.00	40.00	40.00
ETHER, USP, 55 lb drums.	lb.	.18	.18	.18	.16	.15
Anaesthesia, 55 lb drums.	lb.	.23	.23	.23	.21	.20
Nitrous, 1 lb bot.	lb.	.80	.98	.80	.95	.95
Ethyl Chloride, 200 lb bot.	lb. .22	.24	.24	.22	.25	.22
Ethyl Iodide, 5 lb bot.	lb.	6.25	6.25	6.25	6.25	6.25
Formaldehyde, USP, 100 lb cbys	lc-l wks. lb. .10½	.10½	.10½	.09½	.10	.07½
Gall Extract.	lb. .20	.21	.21	.20	.21	.20
GLANDULAR SUBSTANCES						
Duodenal Substance, 1 lb lots	.....	5.50	.....	.....	.....	.....
Liver Substance (Hepatic) 1 lb lots.	.....	4.50	.....	.....	.....	.....
Orchic Substance (Testicular)	.....	4.75	.....	.....	.....	.....
Ovarian Substance, whole, 1 lb lots.	.....	26.00	.....	.....	.....	.....
Ovarian Residue, 1 lb lots.	.....	20.00	.....	.....	.....	.....
Pituitary Substance, whole 1 lb lots.	.....	40.00	.....	.....	.....	.....
Pituitary Substance, Anterior Lobe, 1 lb lots.	.....	27.00	.....	.....	.....	.....
Thyroid, U. S. P., 1 lb lots.	.....	4.75	.....	.....	.....	.....
Oxgall Powder, 1 lb lots.	.....	1.35	.....	.....	.....	.....
GLYCERIN, CP, 550 lb drums	lb.	.14	.15½	.13½	.19	.15
Gold Chloride, bottles.	oz. 12.00	12.50	12.50	12.00	12.50	12.00
Guaiacol, liq. USP. 100 lb cbys.	lb. 1.65	1.75	1.75	1.65	2.25	1.75
Crystals.	lb 2.25	2.50	2.50	2.25	2.50	2.25
Benzoate, 1 lb bottles.	lb.	13.00	13.00	13.00	3.00	13.00
Carbonate, 5 lb boxes.	lb. 1.70	2.50	2.50	1.70	2.50	1.70
Halazone, 5 lb bot.	lb. 2.75	3.25	3.25	2.75	3.25	2.75
Hexamethylenetetramine, USP, 100 lb dr.	lb. .50	.56½	.62½	.48	.62½	.52
Homatropine Hydrobrom USP.	oz.	14.50	14.50	14.50	14.50	14.50
5 oz and 1 oz vials.	oz.	13.50	13.50	13.50	13.50	13.50
Hydrastine Alk, USP, 1 oz vial	oz. 20.50	21.00	21.00	20.50	21.00	20.50
Hydrochlide, USP, 1 oz vials	oz. 20.50	21.00	21.00	20.50	21.00	20.50
Sulfate, 1 oz vial.	oz. 22.50	23.00	23.00	22.50	23.00	22.50
Hydrastinine Hydrochloride, USP, 15 gr vials.	oz.	40.00	40.00	40.00	40.00	40.00
Hydrogen Peroxide, USP, soln 375 lb bbls.	lb. .03½	.04½	.04½	.03½	.05	.03½
Hyoscine Hydrobrom, USP, 1 oz vials.	oz.	13.57	13.57	13.57	13.57	13.57
5 oz, 1 oz vials.	oz. 13.07	13.57	13.57	13.57	13.57	13.07
Hyoscyamine Alk, crystals, 1 oz vials.	oz.	25.07	25.07	25.07	25.07	25.07
Amorphous, 1 oz vial.	oz.	75.07	75.07	75.07	75.07	75.07
Hydrobromide, USP, 1 oz vial	oz.	35.07	35.07	35.07	35.07	35.07
Sulfate, 1 oz vial.	oz.	25.07	25.07	25.07	25.07	25.07
Hypoquinone, 100 lb kegs.	lb.	1.20	1.25	1.20	1.25	1.25
ICHTHYOL, tins.	lb. 4.00	4.25	4.25	4.00	4.25	4.00
Iodide Arsenous, 5 lb bot.	lb.	5.20	5.20	5.20	5.20	5.20
Arsenous-Mercuric soln, 5 lb bot.	lb.	.26	.26	.26	.26	.26
Iodine, crude, 200 lb kegs.	lb. 4.35	4.35	4.35	4.35	4.20	3.88
Resublimed, 10 lb tars.	lb. 4.65	4.70	4.70	4.65	4.70	4.65
Tincture demis.	gal.	4.50	4.80	4.50	4.65	4.55
Iodoform, powd 10 lb bot.	lb.	6.00	6.00	6.00	6.00	6.00
Iron & Ammonium Citrate, USP, 50 lb cans.	lb. .65	.66	.66	.64	.66	.64
Chloride, USP, lump 400 lb bbls.	lb. .06	.08	.08	.06	.08	.05½
Citrate, USP, VIII 25 lb can	lb. .94	1.01	1.01	.94	1.01	.94
Hypophosphite, 5 lb cans.	lb. 1.55	1.65	1.65	1.55	1.65	1.55
Iodide, 1 lb bottles.	lb.	4.28	4.28	4.28	4.28	4.28
Phosphate, USP, 50 lb cans	lb.	.69	.69	.69	.69	.69
& Potas Oxalate, 250 lb bbl	lb.	.45	.45	.45	.49	.45
Pyrophosphate, USP, 50 lb	lb. .74	.80	.80	.74	.80	.74
& Sod Oxalate, 24 lb box.	lb.	.30	.30	.30	.30	.30
Sulfate, USP, crys bbls.	lb. .04½	.04	.04	.04½	.04	.04½
Ferrous dried bbls.	lb.	.08	.08	.08	.08	.08
Valerate, tins.	lb. 2.75	3.00	3.00	2.75	3.00	2.75

In the Tubes of Chemistry

—lay new profits for two Industries!

Incidents of the constructive service one industry renders to others.

ALL INDUSTRY has its obstacles . . . limitations barring many products from new uses and new markets. Often these barriers are paper-thin, yet real enough to place inviting fields of profit just beyond reach.

Adapting a line to new markets may require only a new process—or a new ingredient—a new treatment. But to *find* that unknown quantity—that eternal 'X' of industry—someone must spend thousands of dollars in research work.

Recently that was the case in the lacquer and artificial leather industries. Both found further expansion difficult. And simply because a new and different solvent was needed to fit their products for potential users.

U. S. Industrial Alcohol chemists studied the situation—experimented—then produced an improved quality of Ethyl Acetate that enabled both industries to meet the requirements of a new and wider market.

We could cite scores of similar instances. For, opening new markets and increasing the scope of old ones is really the function of our laboratories. Literally thousands of alcohol-chemical products originate here for the benefit of American business.

Such are the resources and facilities of this company, that practically any quantity of any alcohol product can be supplied to any customer at any time. And such are production standards, that every shipment of each product is identical in quality.

Write for your free copy of our recently revised booklet, "Solvents." Many industrial firms find it exceedingly useful. Very likely you will too!

Often great industrial changes originate in these prosaic tubes of glass. They are the tools of chemistry . . . the "open sesame" to wider markets, greater profits.

U. S. INDUSTRIAL ALCOHOL CO. **U. S. Industrial Chemical Co., Inc**

110 East 42nd Street, New York

Chemicals

{ Monthly Review }

Mercury Production Greater

Quicksilver remains in an unchanged position with the Spanish-Italian monopoly still in control of the European market. This material is being imported here at quite steady prices. The market here is quite firm with prices showing but little change one way or the other.

Domestic production is steadily increasing due to the high prices prevailing, and during 1929 the quantity produced is placed at somewhere between 18,000 and 19,000 flasks which is an increase from the production of 1928. Some factors estimate domestic production of 1929 at 20,000 to 21,000 flasks but this is not the general consensus. However, it is quite well assured that domestic production of the metal is now equivalent to more than half of the consumption in this country which indicates that the high prices developed by the Europeans are slowly but surely causing them to lose one of their principal markets.

Potassium Iodide Remains Weak

Potassium Iodide shows no indications of any change from its weak position and manufacturers continue to sell at prices that spell losses at least to those who are manufacturing the iodide from prime iodine. It appears that there is still material available that has been recovered from illegitimate diversion of tincture of iodine, and as long as this type of material continues to be offered, the legitimate manufacturers will be forced to lose money on every sale in an effort to keep their names before consumers as suppliers of the product.

Rumors and counter-rumors continue to circulate as to new domestic sources of iodine. The California company is understood to be developing slowly, and there are still indications that the iodine that they produce will be handled by a large drug manufacturing company that is one of the largest consumers of iodine.

Another source of iodine is said to be in the course of development by an existing chemical manufacturing company. This development is said to be located in Louisiana. A decided advantage that the latest development is said to possess over other manufacturers of iodine is that the product is produced in the form of potassium iodide in which about 75 per cent. of the iodine is eventually sold to the trade. The Chilean producers obtain their product as iodine, while the Java and some other producers of the world contain their product in the form of copper iodide which is later converted either into iodine or potassium iodide.

It appears that there are certain to be real developments in the iodine market before long regarding sources of supply and consumers will do well to follow conditions rather closely.

Iodine, tincture, has been reduced 10c per gal. and is now selling at $4.50. Competition has developed in this item causing a slightly easier tone.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Jalap Resin, USP lumps, 5 lb tins....lb.	.....	4.00	4.00	4.00	4.00
Powdered, tins....lb.	.....	4.65	4.65	4.65	4.65
Lead Acetate, USP, 100 lb kegs ....lb.	.15	.18	.18	.15	.18	.15
Iodide, USP, VIII 5 lb bot.lb.	3.20	3.40	3.40	3.20	3.40	3.20
Lecithin, 5 oz jars....oz.	1.00	1.30	1.30	1.00	1.30	1.00
Licorice Ext Mass, cases....lb.	.19	.20	.20	.14	.20	.14½
Compound powder, bbls...lb.	.11	.13	.13	.11	.13	.11
LITHIUM CARBONATE, 250 lb bbls....lb.	1.50	1.60	1.60	1.50	1.60	1.50
Citrate, USP, 100 lb kegs..lb.	.....	1.70	1.70	1.70	1.70	1.70
Iodide, 5 lb bottles....lb.	.....	5.40	5.40	5.40	5.40	5.40
Lobeline Sulfate, ¼ oz vial...oz.	.....	8.75	8.75	8.75	8.75	8.75
Magnesium Carbonate, USP, 100 lb bbls....lb.	.....	.10½	.12	.10½	.12	.12
English, oz blocks....oz.	.16	.18	.18	.16	.18	.16
Glycerophosphate, 5 lb tins ....lb	3.20	3.25	3.25	3.20	3.25	3.20
Hypophosphite, 5 lb cans..lb.	.....	1.05	1.05	1.05	1.05	1.05
Salicylate, 100 lb kegs....lb	.....	1.10	1.10	1.10	1.10	1.10
Stearate, bbls....lb.	.23	.25	.25	.23	.25	.23
Manganese Glycerophosphate, 5 lb tins....lb.	2.90	3.00	3.00	2.90	3.00	2.90
Hypophosphite, USP, VIII 5 lb cans....lb.	1.35	1.40	1.40	1.35	1.40	1.35
Iodide, 1 lb bottles....lb.	6.40	6.65	6.65	6.40	6.65	6.40
MENTHOL, USP, 60 lb cases ....lb.	4.35	4.50	6.00	4.35	6.25	4.10
Synthetic, cases....lb.	3.00	3.25	3.25	3.00	3.50	3.00
Mercury Metal, 75 lb flasks...fl.	124.00	124.50	126.00	121.50	134.00	120.00
Bichloride, crys 25 lb box..lb.	.....	1.81	1.81	1.81	1.81	1.81
Gran powd, 100 lb kegs..lb.	.....	1.65	1.65	1.65	1.65	1.65
Bisulfate, 25 lb boxes....lb.	.....	1.62	1.62	1.62	1.62	1.62
Blue Mass, 25 lb boxes....lb.	.....	1.03	1.03	1.03	1.03	1.03
Powd, 25 lb boxes....lb.	.....	1.04	1.04	1.04	1.04	1.04
Blue Ointment, USP, 50%, 25 lb cans....lb.	.....	1.29	1.29	1.29	1.29	1.29
Mild 30%, 25 lb cans....lb.	.....	.92	.92	.92	.92	.92
33 1/3% mercury....lb.	.....	.94	.94	.94	.94	.94
Calomel, 50 lb boxes....lb.	.....	2.05	2.05	2.05	2.05	2.05
English....lb.	2.75	2.80	2.80	2.75	2.80	2.75
Iodide, green, 25 lb jars....lb.	.....	4.80	4.80	4.80	4.80	4.80
Red, USP, 25 lb jars...lb.	.....	4.89	4.89	4.89	4.89	4.89
Yellow, USP, VIII, 25 lb jars....lb.	4.80	4.80	4.80	4.80	4.80	4.80
Red precip, USP, 25 lb boxes ....lb.	2.17	2.17	2.17	2.17	2.17	2.17
Powd., USP, 25 lb boxes.lb.	2.17	2.17	2.17	2.17	2.17	2.17
White precip, USP, 25 lb boxes....lb.	.....	2.20	2.20	2.20	2.20	2.20
Powd., USP, 25 lb boxes.lb.	.....	2.25	2.25	2.25	2.25	2.25
Salicylate, 25 lb bot....lb.	.....	2.32	2.32	2.32	2.32	2.32
With chalk, USP, 25 lb boxes ....lb.	.....	.93	.93	.93	.93	.93
Methanol, Pure 1c-1 drs...gal.	.....	.57	.57	.57	.60	.48
Methyl Salicylate, USP, 50 lb cans....lb.	.40	.42	.45	.40	.45	.42
Methylene Blue, USP, med 5 lb cans....lb	2.00	2.05	2.05	2.00	2.05	2.00
Milk powd, 150 lb bbls....lb.	.14	.15	.15	.14	.15	.14
MORPHINE Alk, 5 oz tin...oz.	.....	11.35	11.35	9.85	10.15	9.85
Acetate, 5 oz tins....oz.	.....	9.35	9.35	7.85	8.25	7.85
Hydrobromide, 5 oz tins, 10 oz lots....oz.	.....	9.35	9.35	7.85	8.35	7.85
Hydrochloride, 5 oz tins, 10 oz lots....oz.	.....	9.25	9.25	7.85	8.35	7.85
Ethyl Hydrochloride, 5 oz tins 10 oz lots....oz.	.....	10.85	10.85	9.35	9.85	9.35
Sulfate, 5 oz tins, 10 oz lots ....oz.	.....	8.85	8.85	7.85	8.35	7.85
Naphthalene Flake, 175 lb bbls wks....lb.	.04½	.05	.05	.04½	.05	.04½
Balls, 250 lb bbls wks....lb.	.05½	.06	.06	.05½	.06	.05½
Oxgall, Purified, 5 lb bot....lb.	1.75	2.50	2.50	1.75	2.50	1.75
USP, 5 lb bot....lb.	2.00	2.50	2.50	2.00	2.50	2.00
Oxyquinoline Sulfate, tins..lb.	8.50	9.25	9.25	8.50	9.25	8.50
Pancreatin, USP, 100 lb....lb.	.....	1.90	1.90	1.90	.....	.....
Paraffin, refd, 200 lb cs slabs 118-120 deg MP....lb.	.08	.09	.09	.08	.09	.08
128-132 deg MP....lb.	.07½	.07½	.07½	.07½	.07½	.07½
Para-Aldehyde, USP, 100 gal drums....lb.	.67	.77	.77	.67	.77	.67
Pepsin, USP, 100 lbs. 1:3000.lb.	.....	2.25	2.25	2.25	2.50	2.50
100 lbs. 1:6000....lb.	.....	4.00	4.00	4.00	5.00	5.00
100 lbs. 1:10000....lb.	.....	6.50	6.50	6.50	8.35	8.35
Peptone, powd, 5 lb bot....lb.	.....	.....	.....	.....	.....	.....
PHENOLPHTHALEIN, USP, 100 lb drums....lb.	1.10	1.20	1.20	1.10	1.20	1.10
5 lb cans 100 lb lots..lb.	1.23	1.30	1.30	1.23	1.30	1.23
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz lots ....oz.	.....	3.25	3.25	3.25	3.25	3.25
Nitrate, 25 oz lots....oz.	.....	3.25	3.25	3.25	3.25	3.25
Single ounce....oz.	.....	3.50	3.50	3.50	3.50	3.50
Alkaloid, 15 gr vials....vl.	.....	.75	.75	.75	.75	.75
Piperazine Hydrate, 1 lb bot.lb.	.....	15.00	15.00	15.00	15.00	15.00
Piperadine, 25 oz bottles....lb.	.....	8.00	8.00	8.00	8.00	8.00
Popodhyllin 5 lb bottles....lb.	4.35	4.50	4.50	4.35	4.50	4.35
Potassium Acetate, USP, 100 lb kegs....lb.	.29	.30	.30	.29	.30	.29
Bicarb, USP, crys 320 lb bbls ....lb.	.13	.13½	.13½	.08½	.09	.08½
Bromide, USP, crys 100 lb cs ....lb.	.42	.43	.40	.39	.43	.42
Citrate, USP, 50 lb bbl....lb.	.51	.53	.55	.51	.55	.51
Guaiacol Sulfonate....lb.	1.95	2.25	2.25	1.95	2.25	1.95

It's Predominant **Quality**

that sells **Falba** *Products to the Manufacturing Pharmacist*

Sarnov Brand Olive Oil. Refined and packed by the Societa Anomima Raffinerie Nazionali di Olii Vegetali, the well-known "Sarnov Olive Oils" are distributed exclusively by us in the United States and Canada. We shall be pleased to quote you on spot stocks carried in New York for your convenience; on import orders for Sarnov Olive Oils, and on private brand oils packed under your own label to meet your quality specifications.

Falba White Beeswax. A product of standard purity and uniform whiteness used extensively in the manufacture of toilet creams which demand an excellence of quality. Gratifying results are obtainable by the use of Falba Brand Beeswax in combination with Golden Fleece Lanoline.

Golden Fleece Lanoline, U. S. P. Unexcelled as a base for toilet creams, Golden Fleece Lanoline, an extremely fine-textured product is practically odorless. Naturally, Golden Fleece Lanoline is a U. S. P. product, and every shipment is tested by the German Government Bureau of Standards. Obtainable in all packings—drums, barrels, and tins of all sizes; hydrous and anhydrous.

Imported Chlorophyll (Oil, Alcohol, Water, Water and Alcohol Soluble). This Chlorophyll is light-proof and alkali-proof. Used for coloring where for sanitary and other reasons an artificial dye is unsuitable. It is unrivaled for bleaching yellowish oils and soaps, for coloring vegetable oils, such as cotton, linseed and olive oils; and for mineral oils, wax preparations, candles and petrolatum.

Sulphur Precipitated, U. S. P. **Hypophosphites, U. S. P.** **Acid Hypophosphorous, U. S. P.**

Sole American Agents

Pfaltz & Bauer, Inc.
300 PEARL STREET-NEW YORK

217 E. Illinois St. CHICAGO
359 St. James St., West MONTREAL, CANADA
683 Antonia Ave. LOS ANGELES

{ *Monthly Review* }

Bismuth Subnitrate Still Under Cost

Bismuth subnitrate continues to be the only one of the bismuth salts that all producers are selling at prices which represent losses on every sale. The same competitive conditions exist in this market as they have for a long time past. The fact that this product sells at a lower price than the metal from which it is made, clearly indicates the true state of this market.

The sources from which the manufacturers can obtain bismuth for the manufacture of the salts are very limited and the prices are quoted firmly at the same figures to all. Therefore, there exists no possibility of any one manufacturer of bismuth salts commanding a profit at present prices for the subnitrate. For this reason, the market for the subnitrate is bound to advance sooner or later and consumers should always be well stocked on the items so that they realize something on the present low market.

Phenol Derivatives Steady

Supplies of phenol are now more plentiful and the tone of the market is much more favorable to consumers. This is not to be construed, however, as meaning that a reduction in price or even shading of the schedule now in effect is at all likely, since demand continues very heavy and the relief has come from increased production rather than to any lessened consumption.

Phenol derivatives such as salicylates and phenolphthalein continue to move in good volume at steady unchanged prices, although a new factor in phenlophthalein is reported to have caused some uneasiness in this one item.

Citric Acid Position Firm

Citric acid shows no change in position or price and the domestic market is entirely in the hands of the domestic producers. Imports are at a very low point since the prices for import duty paid are considerably above the domestic quotations.

The situation in Europe is quite the same as it has been for some time past. The Italians are not giving the necessary supplies of citrate of lime to the rest of Europe for manufacture of citric acid and supplies of citrate of lime are understood to be going to Europe from this country so that the European citric acid plants may continue.

In this country supplies are now available from the fruit growing industry and also from the recently developed process of fermentation of sugar. For this reason, this country is not in any way dependent upon Italy and consumers are able to be assured that prices will not advance.

Acetone is very easy in tone due to competition resulting from a new maker recently entering the field. However, the low prices now ruling make it appear that new channels of consumption will shortly steady the position of the product.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Potassium Hypophosphite, 10 lb. cans ..... lb.	.80	.85	.85	.80	.85	.80
Iodide, USP, 100 lb cases .. lb.	3.25	3.30	3.55	3.25	3.80	3.25
Lactophosphate, 4 oz bot .. lb.	.....	.90	.90	.90	.90	.90
Permangan, USP, crys, 100 lb drs wks ..... lb.	.15	.15½	.15½	.15	.16½	.14½
Phosphate dibasic pure, kegs ..... lb.	.....	.49	.49	.49	.49	.49
Salicylate, 25 lb cans ..... lb.	.....	1.18	1.18	1.18	1.18	1.18
Sulfate, USP, VIII, 100 lb kegs ..... lb.	.13	.15	.15	.13	.15	.13
Sulfocyanide, CP 15 lb jars lb.	.....	.50	.50	.50	.50	.50
Tartrate, CP, tins ..... lb.	.....	.65	.65	.65	.65	.65
Pyrogallol, USP, see Acid Pyrogallic	.....	.....	.....	.....	.....	.....
Quinidine Alk, 100 oz tins ... oz.	.70	.75	.75	.70	.75	.70
Sulfate, 100 oz tins ..... oz.	.....	.50	.50	.50	.50	.50
QUININE SULFATE, USP, 100 oz tins ..... oz.	.....	.40	.40	.40	.40	.40
1 oz tins, 100 oz lots .... oz.	.....	.47	.47	.47	.47	.47
Dutch, 100 oz tins ..... oz.	.....	.40	.40	.40	.40	.40
Java, 100 oz. tins ..... oz.	.....	.40	.40	.40	.40	.40
Japanese 100 oz tins ..... oz.	.....	.40	.40	.40	.40	.40
Acetate ..... oz.	.....	.78	.78	.78	.78	.78
Arsenate ..... oz.	.....	.78	.78	.78	.78	.78
Benzoate ..... oz.	.....	.78	.78	.78	.78	.78
Bisulfate, USP ..... oz.	.....	.40	.40	.40	.40	.40
Resale ..... oz.	.....	.39	.39	.37	.39	.37
Citrate ..... oz.	.....	.51	.51	.51	.51	.51
Dicarbonate, 1 oz tins .... oz.	.....	2.56	2.56	2.56	2.56	2.56
Dihydrobromide ..... oz.	.....	.54	.54	.54	.54	.54
Dihydrochloride, USP .... oz.	.....	.54	.54	.54	.54	.54
Ethyl Carbonate, 16 oz tins ..... oz.	.....	.58	.58	.58	.58	.58
Ferrocyanide ..... oz.	.....	.78	.78	.78	.78	.78
Formate ..... oz.	.....	.73	.73	.73	.73	.73
Glycerophosphate ..... oz.	.....	.80	.80	.80	.80	.80
Hydrobromide, USP ..... oz.	.....	.50	.50	.50	.50	.50
Hydrochlorosulfate ..... oz.	.....	.54	.54	.54	.54	.54
Hydrochloride & Urea, USP ..... oz.	.....	.74	.74	.74	.74	.74
Hypophosphite ..... oz.	...	.70	.70	.70	.70	.70
Lactate ..... oz.	.....	.66	.66	.66	.66	.66
Phenolsulfonate ..... oz.	.....	.78	.78	.78	.78	.78
Phosphate ..... oz.	.....	.62	.62	.62	.62	.62
Salicylate, USP ..... oz.	.....	.52	.52	.52	.52	.52
Tannate, USP ..... oz.	.....	.41	.41	.41	.41	.41
Tartrate ..... oz.	.....	.78	.78	.78	.78	.78
Valerate ..... oz.	.....	.78	.78	.78	.78	.78
& Urea Hydrochloride, USP ..... oz.	.....	.88	.88	.88	.88	.88
Rennet, N. F. 5 lb 1:25,000 ... lb.	2.95	3.50	3.50	2.95	3.50	2.95
Resorcinol, USP, 25 lb cans .. lb.	1.60	1.65	1.75	1.65	2.00	1.70
Rochelle Salt, USP, 225 lb bbl ..... lb.	.23	.23½	.23½	.23	.23½	.23
Imp. USP, 300 lb bbls ..... lb	.....	.23	.23	.23	.23	.23
Rock Sugar, 5 lb boxes ..... lb.	.....	.15	.15	.15	.15	.15
Saccharin, USP, 10 lb cans ... lb.	1.70	1.80	1.80	1.70	1.80	1.70
USP, Soluble, 10 lb cans ... lb.	1.75	1.85	1.85	1.75	1.85	1.75
Salicin, USP ..... lb.	.....	9.31	9.31	4.86	4.86	4.86
SALOL, USP, 100 lb drums .. lb.	.....	.90	.90	.90	.90	.90
Saltpetre, powd, bbls wks .... lb.	.06¼	.08½	.08½	.06½	.08½	.06¼
Santonin, USP, bulk ..... lb.	.....	129.50	129.50	129.50	145.00	129.50
Saponin, refined ..... lb.	1.30	1.50	1.50	1.30	1.50	1.30
Siedlitz Mixture, 250 lb bb .. lb.	.....	.....	.....	.....	.....	.....
Silver Metal, American ..... oz.	.....	.57½	.57½	.57½	.60½	.57½
Iodide, 16 oz lots ..... oz.	.....	.69	.69	.69	.69	.69
Nitrate, 100 oz bottles .... oz.	.40½	.42½	.42½	.40½	.45	.40½
Nucleinate, bulk ..... oz.	.....	.37	.37	.37	.37	.37
Proteinate ..... oz.	.....	.32	.32	.32	.32	.32
SODIUM BENZOATE, USP, 100 lb bbls ..... lb.	.45	.49	.49	.45	.55	.50
Bromide, USP, 100 lb kegs lb.	.42	.43	.43	.42	.43	.42
Cacodylate, USP, 25 lb bot ..... lb.	4.75	5.90	5.90	4.75	6.10	4.75
Citrate, USP, X 50 lb kegs lb.	.45	.47	.47	.45	.47	.45
USP VIII, 50 lb kegs .... lb.	.38	.40	.40	.38	.40	.38
Glycerophosphate, USP, crys 25 lb cans ..... lb.	1.40	1.55	1.55	1.40	1.55	1.40
Powder, 25 lb tins ..... lb.	1.45	1.60	1.60	1.45	1.60	1.45
Soln, USP, 25 lb tins ... lb.	1.05	1.20	1.20	1.05	1.20	1.05
Hypophosphite, USP, 25 lb cans ..... lb.	.70	.75	.75	.70	.75	.70
Iodide, USP, 25 lb jars ... lb.	4.25	4.30	4.30	4.25	4.30	4.25
Phosphate (Mono-Sodium), 100 lb kegs ..... lb.	.30	.31	.31	.30	.31	.30
Di-Sodium USP, granular, 275 lb bbls ..... lb.	.07½	.08	.08	.07½	.08	.07½
Pyrophosphate, 100 lb kegs ..... lb.	.....	.29	.29	.29	.29	.29
Salicylate, 100 lb kegs .... lb.	.....	.47	.47	.47	.47	.47
Sulfocarbolate, USP, 100 lb kegs ..... lb.	.....	.31	.31	.31	.31	.31
Sulfocyanate, CP crys, jars included ..... lb.	.....	.60	.60	.60	.60	.60
Spartein Sulfate, USP, 25 oz bulk ..... oz.	.65	.70	.70	.60	.70	.60
Single oz vial ..... oz.	.77	.90	.90	.77	.90	.77
STRONTIUM BROMIDE USP, 50 lb kegs ..... lb.	.51	.52	.52	.51	.52	.51
Carb, 100 lb kegs wks .... lb.	.....	.20	.20	.20	.20	.20
Iodide, USP, 25 lb jars .... lb.	.....	4.00	4.00	4.00	4.00	4.00
Lactate, kegs ..... lb.	.90	1.10	1.10	.90	1.10	.90
Nitrate, 600 lb bbls NY ... lb.	.08	.08½	.08½	.08	.08½	.08
Imp. bbls NY ..... lb.	.08	.08½	.08½	.08	.08½	.08
Salicylate, USP, 100 lb keg lb.	.....	1.10	1.10	1.10	1.10	1.10

ACID CITRIC U.S.P.

Crystals, Granular, Powder

Barrels or Kegs

CITRATES—Potassium, Sodium, Lithium, Ammonium

All Scale Salts

MERCK & CO.

INC.

MANUFACTURING CHEMISTS

SUCCESSORS TO

POWERS-WEIGHTMAN-ROSENGARTEN CO.

Philadelphia **New York** **RAHWAY, N. J.** **St. Louis** **Montreal**

ANTIPYRINE
AMIDOPYRINE
GUAIACOL CARBONATE

RESORCIN U. S. P.
RESORCIN TECH.
DIMETHYL SULPHATE
SODA SULPHITE ANHYDROUS
PYRIDINE C. P.
PYRIDINE TECH.

RHODOL (Metol)
HYDROQUINONE
QUINONE
GLYCIN
SACCHARIN SOL. & INSOL.

NEWPORT CHEMICAL WORKS, INCORPORATED

SUCCESSOR TO

Rhodia Chemical Company

21 SPRUCE STREET, NEW YORK **Works: New Brunswick, N. J.**

Chicago Branch Office: 605 W. Washington Blvd. **Clayton F. Shoemaker, Phila. Rep., 689 Drexel Bldg.**

Monthly Review

Bulgarian Rose Oil Exports

According to the official figures published by the General-Direction of Statistics of Bulgaria, exports of rose oil in July 1929 amounted to 1,138 kilos, valued at 114,762,644 leva, consigned to the following countries: Austria, 3 kilos; Great Britain, 100 kilos; Germany, 129 kilos; Italy, 4 kilos; United States, 113 kilos; France, 729 kilos; Czechoslovakia, 3 kilos; Switzerland, 56 kilos; other countries, one kilo. During the first seven months of 1929, exports of rose oil totalled 1,849 kilos, valued at 180,061,599 lava.—*Chemist and Druggist.*

Cinnamon Oil from Java Up

The following table shows exports from Colombo, Ceylon, in quantity and value, of papain, cinnamon oil, and other essential oils and crude drugs, during September quarter of 1928 and 1929:

	1928 (Sept. Quarter)		*1929 (Sept. Quarter)*	
	Pounds	*Value*	*Pounds*	*Value*
Cardamons	62,800	$46,700	46,000	$35,000
Cinnamon chips	273,000	20,000	337,000	21,000
Cinammon quills	429,000	628,000	1,223,000	374,000
Citronella oil	338,000	127,500	789,000	287,000
Areca nuts	4,592,000	341,000	4,966,000	318,000
Cinnamon oil	2,800	4,500	3,100	4,500
Cinammon leaf oil	12,300	14,500	17,500	23,000
Papain	34,000	96,000	37,300	67,000

Apricot Kernel, due to lower cost of raw material, has weakened somewhat and is now being sold at 37c per lb. This represents a decline of 3c per lb. during the past month. This decline, however, has strengthened the market so that no further recessions are likely.

Cloves have been definitely weak or some time and the market continues to decline. Stocks are freely offered at $1.75 and $1.80 per lb. as to quantity which is about 20c per lb. under the high price of last month. The new crop comes in from October to December and has had the effect of definitely weakening the situation on oil of cloves.

Cananga, rectified is slightly lower at $3.30 to $3.40 which represents an adjustment in price on this commodity. The market is routine with nothing special to report.

Sassafras is firm at 14c and 16c per lb. Consumption is normal but spot stocks are reported as not excessive. No shift in this commodity that would be favorable to the buyer is expected in the near future.

Wormseed, which has presented a strong undertone for several months past, has weakened somewhat and price has weakened to $3.40 per lb. in the spot market. This, in the opinion of some dealers, does not reflect a general weakening tendency but is attributed to the fact that some holders have let go in order to convert some of their stocks into cash. This price decline is not fortified by conditions, however, as a poor crop has decreased the supplies usually available at this time of year. A slow demand for wormseed oil has also attributed to a temporary weakness but higher prices will undoubtedly again prevail.

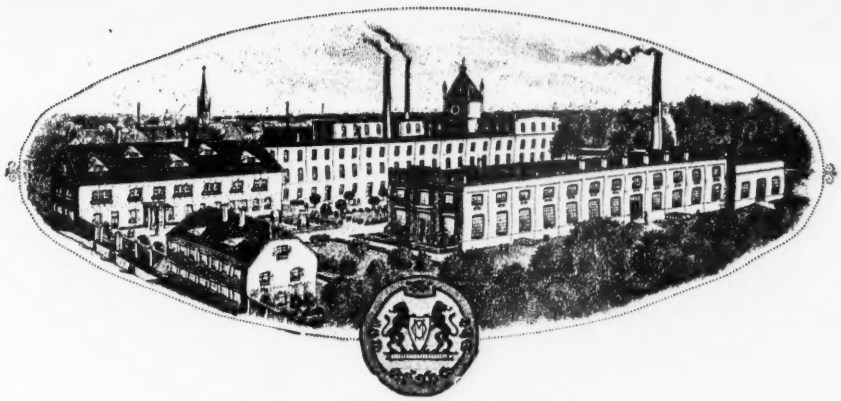
	Current Market	1929 High	1929 Low	1928 High	1928 Low
Strophanthin, USP, 1 oz vial	.....	19.00	19.00	19.00	19.00
Crystals	.....	75.00	75.00	75.00	75.00
Strychnine Alk, USP crys, 100 oz tins	.....	.61	.66	.61	.66	.56
Powdered	.....	.51	.56	.51	.56	.46
Acetate	.....	.65	.65	.65	.65	.55
Arsenate, 25 oz cans	.....	.65	.65	.65	.65	.55
Glycerophosphite, USP	.....	.65	.65	.65	.65	.55
Hydrobromide	.....	.65	.65	.65	.65	.55
Hydrochloride	.....	.65	.65	.65	.65	.55
Hypophosphite	.....	.75	.75	.75	.75	.65
Nitrate, USP	.55	.72	.72	.55	.72	.52
Phosphate	.....	.65	.65	.65	.65	.55
Sulfate, USP, powd	.....	.42	.56	.42	.56	.38
Sugar, refined, 275 lb bbl 100 lb	5.80	5.90	5.90	5.80	5.90	5.80
Milk, USP, 200 lb bbls	.18	.20	.20	.18	.20	.18
Sulfonethylmethane, USP, 10 lb boxes	3.85	4.05	4.05	3.85	4.05	3.85
Sulonmethane, USP, 10 lb box	2.65	3.85	3.85	2.65	3.85	2.65
Sulfur flwrs. washed, USP, 125 lb bbl	.....	.06	.06	.06	.06	.06
Iodide, USP, VIII, 5 lb bot	.....	4.55	4.55	4.55	4.55	4.55
TARTAR EMETIC, USP, 300 lb bbls	.29	.31	.31	.29	.36	.32½
Terebene, tins	.....	.85	.85	.85	.85	.85
Terpin Hydrate, USP, 100 lb kegs	.40	.42	.42	.40	.47	.40
Theobromine Alk, 5 lb cans	1.90	2.25	2.25	1.90	2.25	1.90
Sod. Salicylate, 1 lb bot	.....	2.10	2.10	2.10	2.10	2.10
Sod. Benzoate, 1 oz vials	.....	1.00	1.00	1.00	1.00	1.00
Thymol, USP, 25 lb tins	2.55	2.70	2.70	2.25	2.75	2.25
Iodide kegs	6.00	7.00	7.00	6.00	7.00	6.50
Veratrine Alkaloid	.....	2.25	2.25	2.25	2.25	2.25
Sulfate, 1 oz vials	.....	2.25	2.25	2.25	2.25	2.25
Witch Hazel Ext., 50 gal bbl	.80	1.00	1.00	.80	1.00	.80
Zinc Carb, USP, 100 lb keg	.28	.31	.31	.28	.31	.28
Chloride, USP, 25 jars ex	.24	.29	.29	.24	.29	.24
Iodide, 5 lb bottles	.....	5.22	5.22	5.22	5.22	5.22
Oxide, USP, 100 lb bbls	.16½	.17½	.18	.16½	.18	.17
Stearate, USP, 50 lb bbl	.24	.26	.26	.24	.26	.22
Sulfate, USP, 100 lb bbl	.08	.09	.09	.08	.09	.08
Sulfocarbolate, 100 lb kegs	.23	.29	.29	.23	.29	.29

Natural Derivatives

Anethol, 2 lb bot	1.25	1.30	1.30	1.25	1.30	1.25
Borneol, 1 lb bot	2.40	2.50	2.50	2.40	2.60	2.40
Carvol, 5 lb bot	3.50	3.60	3.60	3.50	2.85	3.50
Citral, 25 lb cans	2.70	2.75	2.75	2.70	2.75	2.70
Citronellal, 1 lb bot	2.70	2.75	2.75	2.70	3.25	2.70
Eucalyptol, USP, 50 lb cans	1.00	1.05	1.05	1.00	1.05	1.00
Eugenol, USP, 25 lb cans	2.70	2.75	2.75	2.70	2.90	2.70
Geraniol, domestic, 50 lb cases	2.50	2.70	2.70	2.50	2.70	2.50
Imported, 5 lb bot	2.90	3.10	3.10	2.90	3.10	2.90
Iso-Eugenol, 1 lb bot	3.75	3.80	3.80	3.75	4.50	3.75
Imported, 1 lb bot	3.70	3.80	3.80	3.70	3.80	3.70
Linalol from Bois de Rose, 5 lb bot	3.20	3.25	3.25	3.20	3.25	3.00
Rhodinol, 1 lb bot	7.50	7.75	7.75	7.50	7.75	6.00
Saffrol, drums	.....	.27	.27	.27	.27	.27
60 lb cans	.....	.29	.29	.29	.29	.29

Synthetic Aromatics

Acetophenene, CP, 1 lb bot	3.50	3.65	3.65	3.50	3.75	3.50
Aldehyde, C 8 (Otcyl) 1 lb bot	.....	50.00	55.00	50.00	55.00	55.00
C 7, 1 lb bot	4.50	5.50	5.50	4.50	5.50	4.50
C 9 (Nonyl), 1 lb bot	.....	140.00	140.00	140.00	140.00	140.00
C 10 (Decyl), 1 lb bot	.....	48.00	48.00	48.00	48.00	48.00
C 14, 1 lb bot	.....	32.00	32.00	22.50	25.00	22.50
C 16, 1 lb bot	.....	24.00	32.00	24.00	80.00	31.00
Aubepine, see Anisic Aldehyde						
AMYL ACETATE, pure, 5 gal cans	5.50	6.85	6.85	4.75	5.50	4.75
Butyrate, 1 lb bot	1.70	1.75	1.75	1.70	1.90	1.70
Butyrate, 5 lb bot	.....	1.75	1.75	1.75	1.75	1.75
Cinnamate, 5 lb bot	9.50	9.75	9.75	9.50	9.75	9.50
Formate, 1 lb bot	.....	1.90	1.90	1.90	1.90	1.90
Formate, 5 lb bot	.....	1.75	1.75	1.75	1.75	1.75
Phenyl Acetate, 1 lb bot	4.50	5.00	5.00	4.50	5.00	4.50
Salicylate, 100 lb cbys	1.25	1.30	1.30	1.25	1.30	1.25
Imported	2.25	2.50	2.50	2.25	2.50	2.25
Anisic Aldehyde, 1 lb bot	3.00	3.25	3.25	3.00	3.25	3.00
Benzaldehyde, USP, 40 lb cbys	.....	.....	.....	.....	.....	.....
50 lb cbys	1.25	1.35	1.35	1.25	1.35	1.25
FFC, 40 lb cbys	1.35	1.45	1.45	1.35	1.45	1.35
Benzoic Ether, see Ethyl Benzoate						
Benzophenone, 1 lb bot	4.50	5.00	5.00	4.50	5.00	4.50
Benzyl Acetate, 100 lb cbys	.90	1.10	1.10	.90	1.10	.90
Alcohol, 5 lb bot	1.25	1.35	1.35	1.25	1.35	1.25
Benzoate, 5 lb bot	1.05	1.15	1.35	1.05	1.35	1.25
BENZYL BENZOATE	1.35	1.40	1.40	1.35	1.40	1.35
Medicinal, FFC	.....	1.40	1.40	1.40	1.40	1.40
Buytrate, CP, 1 lb bot	9.25	9.50	9.50	9.25	9.50	9.25



Laboratories of Metzner & Otto, Leipzig, Germany

ESTABLISHED 1861

METZNER & OTTO

LEIPZIG, GERMANY

DRUGS - CHEMICALS - ESSENTIAL OILS

Sole Agents for the U. S. and Canada

EURO AMERICAN CORPORATION

52-54 Beekman Street
NEW YORK, N. Y.
Phone Beekman 3336

Works:
125-135 N. J. R. R. Ave.
Newark, N. J.

LAVENDESTER (M. & O.)

The latest Metzner & Otto product. An economical and efficient substitute for Oil Lavender.

Prices and samples on request.

Aldehydes C-8 to C-16	Oil Bergamot	Oil Peppermint
Anethol	Oil Cedarwood	Oil Sassafras
Coumarin	Oil Coriander	Phenyl Ethyl Alcohol
Diethylphtalate	Oil Dill Seed	Phenyl Acetaldehyde
Heliotropin C. P.	Oil Juniper Berries	Rose Absolute
Jasmine Absolute	Oil Lavender U. S. P.	Safrol
Menthol U. S. P.	Oil Lemon U. S. P.	Terpineol Imp.
Neroli Italian	Oil Orange U. S. P.	Vanillin U.S.P.

We offer to the discriminating buyer an extensive line of quality products from the laboratories of Metzner & Otto, Leipzig, Germany. Packed and distributed in the United States and Canada by the Euro American Corporation.

Seventy years of successful experience in the chemical industry is recognized as a guarantee of stability.

QUALITY -- SERVICE -- PRICE

{ Monthly Review }

Ethiopian Civet Conditions

Current civet prices at Addis Abaca, Ethlopia, range from $2.20 to $2.60 United States currency per export ounce, which prices are said to represent an increase of approximately 50 per cent. since August at which time through lack of demand, prices fell about $1.60 per ounce says Vice Consul J. L. Park, Addis Ababa.

If the demand for civet is brisk in Ethiopia, very little of it finds its way to Aden; occasionally, however, important quantities of Ethiopian civet are reported to accumulate at Aden. The United States, Great Britain, and France are the principal markets.

Adulteration is commonly attempted by the native suppliers of civet. Banana pulp is the most common adulterant. Experienced dealers, however, have various practical tests, such as color, consistency, and odor, and are believed capable of protecting the foreign importer. The best qualities are said to be those from the Provinces of Djimma and Wollega, the latter being called "Kekempte."

Quotations on civet are usually made f. o. b. Addis Ababa, with a statement of costs to seaboard. They can be made if desired, f. o. b. Djibuti, French Somaliland, the port for Ethiopia.

Reasonably dependable civet at present is hardly obtainable for less than 13s. 2d. per ounce f. o. b. Djibouti.

Citronella Scarcity Caused by Drought

Citronella Ceylon continues exceptionally strong with quotations here advancing to 59c and 61c per lb. The drought abroad has so injured the crop that the primary market has practically no stocks to offer for shipment and quotations there, for what small lots are available, are very high.

Citronella Java, however, is easier at 77c and 82c per lb. The tendency here is to drop back after the recent advance to a price more in line with general market tendencies. This commodity has been in ample supply the rise having been attributed to munipulation abroad. There has been some recent unloading of stocks there, however, which has created an easier tendency.

Owing to the long drought during July and August, supplies of citronella oil have been somewhat scarce, and prices have fluctuated during the quarter from 1.12 to 1.22 rupees states Consul S. W. Eells, Colombo, Ceylon. (Average value of rupee during this period was $0.36 United States currency).

The northeast monsoon rains began in September, although they did not continue so plentifully as is general at that time of the year. However, it was expected that there would be more rain and that supplies of citronella oil would be more plentiful during November and December. The following table gives the different prices at which citronella oil was sold per pound during the quarter ended September 30, 1929:

Week End	*Rupees*
July 6	0.96 to 0.99
" 13	0.98 " 1.02
" 20	0.98 " 1.01
" 27	0.98 " 1.01
August 3	0.98 to 0.01
" 10	1.06 " 1.08
" 17	1.05 " 1.12
" 24	" 1.05
" 31	1.00 " 1.02

		Current Market	1929 High	1929 Low	1928 High	1928 Low
Benzyl Cinnamate, 1½ bot.	lb.	9.25	9.50	9.25	9.50	9.25
Formate, 1 lb bot	lb.	3.15	3.25	3.15	3.75	3.15
Propionate, 1 lb bot	lb.	3.60	3.75	3.60	3.75	3.60
Succinate, 1 lb bot	lb.	5.25	5.50	5.25	5.50	5.25
Valerate, 5 lb bot	lb.	3.00	3.25	3.00	3.25	3.00
Bornyl Acetate, 1 lb bot	lb.	2.90	3.00	2.90	3.25	2.90
Bromstyrol, 25 lb cases	lb.	4.10	4.25	4.10	5.00	4.10
Butyl Anthranilate dom, 1 lb bot	lb.					
Butyric Ether, see Ethyl Butyrate						
Cinnamic Acid, 5 lb cans	lb.	3.25	3.50	3.25	3.50	3.25
Alcohol liquid, 1 lb bot	lb.	3.25	3.35	3.25	3.50	3.25
Crystallizable	lb.	7.00	8.00	7.00	8.00	7.00
Aldehyde	lb.	2.25	2.50	2.25	2.50	2.25
Imported, 1 lb bot	lb.	7.75	9.00	7.75	9.00	7.75
Citronelyl Acetate, 1 lb bot	lb.	7.75	8.00	7.75	8.00	7.75
Coumarin, 25 lb cans	lb.	3.50	4.00	3.50	4.00	3.50
DECYL ALCOHOL	lb.	25.00	28.00	25.00	28.00	25.00
Diethyl Phthlate see Chemicals						
Diphenyloxide, 25 lb tins	lb.	1.00	1.15	1.00	1.15	1.00
Diphenyl Methane	lb.	1.50	1.75	1.50	1.75	1.50
Duodecyl Alcohol	lb.	20.00	22.00	20.00	22.00	20.00
Ethyl Acetate, pure, 5 lb bot	lb.	.45	.50	.45	.50	.45
Benzoate, 5 lb bot	lb.	1.50	1.75	1.50	1.75	1.50
Ethyl Butyrate, 5 lb bot	lb.	1.80	2.00	1.80	2.00	1.80
Caproate, 1 lb bot	lb.	3.25	3.50	3.25	3.50	3.25
Cinnamate, 1 lb bot	lb.	4.00	4.50	4.00	4.50	4.00
Formate, 5 lb bot	lb.	1.00	1.25	1.00	1.25	1.00
Methyl Paracresol, 1 lb bot	lb.	3.25	3.50	3.25	3.50	3.25
Phenyl Acetate, 5 lb bot	lb.	3.75	4.00	3.75	4.00	3.75
Valerate, 5 lb bot	lb.	.....	3.75	3.75	3.75	3.75
Salicylate, 5 lb bot	lb.	1.95	2.00	1.95	2.10	1.95
Formic Ether see Ethyl Formate						
Geranyl Acetate, 1 lb bot	lb.	3.20	3.25	3.25	3.20	3.25	3.20
Butyrate, 1 lb bot	lb.	13.00	13.50	13.50	13.00	13.50	13.00
Formate, 1 lb bot	lb.	12.00	12.50	12.50	12.00	12.50	12.00
Glyco Ester	lb.	.90	1.00	1.00	.90	1.00	.90
Heliotropin, 100-10 lbs	lb.	1.65	1.75	1.75	1.65	1.75	1.65
Imported	lb.	1.95	2.05	2.05	1.95	2.05	1.95
Hydroxycitronellal, 1 lb	lb.	5.50	7.50	7.50	5.50	7.50	5.50
Indol, CP, 1 oz bot	oz.	2.90	3.00	3.00	2.90	4.50	2.90
IONONE, 1 lb bot 100%	lb.	5.00	6.00	6.00	5.00	7.00	5.00
Alpha	lb.	4.80	5.00	5.20	4.80	6.25	4.75
Beta	lb.	5.70	5.75	5.75	5.70	7.25	5.50
Methyl	lb.	5.75	6.00	6.00	5.75	7.25	5.75
Iso Borneol	lb.	2.15	2.25	2.25	2.15	2.25	2.15
Iso Bornyl Acetate	lb.	2.80	3.00	3.00	2.80	3.00	2.80
Iso-Butyl Benzoate, 5 lb bot	lb.	2.75	3.00	3.00	2.75	3.00	2.75
Iso-Safrol, 1 lb bot imp	lb.	1.65	1.75	1.75	1.65	1.75	1.65
Domestic, 5 lb bot	lb.	3.50	3.75	3.75	3.50	3.75	2.50
Lynalyl Acetate, 1 lb bot	lb.	3.25	4.25	4.25	3.25	4.50	3.25
Benzoate, 1 lb bot	lb.	13.00	14.00	14.00	13.00	14.00	13.00
Formate, 5 lb bot	lb.	10.50	12.00	12.00	10.50	12.00	10.50
METHYL ACETOPHENONE	lb.	3.35	3.50	3.50	3.35	3.75	3.35
Anthranilate, 1 lb bot	lb.	2.40	2.45	2.45	2.40	2.45	2.40
Imported	lb.	2.70	2.75	2.75	2.70	2.75	2.70
Anthranilic Acid	lb.	11.75	12.00	12.00	11.75	12.00	11.75
Benzoate, 5 lb bot imp	lb.	1.75	1.85	1.85	1.75	2.00	1.75
Domestic, 5 lb bot	lb.	1.75	2.00	2.00	1.75	2.00	1.75
Cinnamate, 1 lb bot	lb.	3.75	4.25	4.25	3.75	4.25	3.75
Heptenone, 1 lb bot	lb	8.50	9.00	9.00	8.50	9.00	8.50
Paracresol, 1 lb bot	lb	4.50	8.00	8.00	4.50	8.00	4.50
Phenylacetate, 5 lb bot	lb	3.75	4.00	4.00	3.75	4.00	3.75
Salicylate, USP, 500 lb dr	lb.	.....	.40	.40	.40	.40	.40
50 lb cases	lb.	.....	.42	.42	.42	.42	42
Mirbane rect, 1,000 lb drs	lb.	.12	.13	.13	.12	.13	12
Musk Ambrette 1 lb cans	lb	6.50	6.75	6.75	6.50	6.75	6.50
Ketone 1 lb cans	lb	8.00	8.15	8.15	8.00	8.15	8.00
Xylene 5 lb cans	lb.	2.25	2.35	2.35	2.25	2.35	2.25
Nerolin 1 lb cans	lb.	1.35	1.40	1.40	1.35	1.50	1.35
Octyl Alcohol 1 lb bot	lb.	30.00	32.00	32.00	30.00	32.00	30.00
Oenanthic Ether lb bot	lb.	1.90	2.00	2.00	1.90	2.00	1.90
Paracresol Methyl Ether	lb.	6.50	6.75	6.75	6.50	6.75	6.50
Paracresyl Acetate	lb.	5.50	5.75	5.75	5.50	5.75	5.50
Para Cymene Refd 110 gal dr	gal.	2.25	2.50	2.50	2.25	2.50	2.25
PHENYLACETALDEHYDE 50% 1 lb bot	lb.	4.75	5.00	5.00	4.75	7.50	4.75
Imported 50%	lb.	4.75	5.00	5.00	4.75	6.50	4.75
100%	lb.	8.00	8.25	8.25	8.00	8.25	8.00
Phenylacetic Acid 1 lb bot	lb.	3.00	3.25	3.25	3.00	3.25	3.00
Phenyl Diacetate 1 oz bot	oz.	3.00	3.25	3.25	3.00	3.25	3.00
1 lb bot	lb.	8.00	10.00	10.00	8.00	10.00	8.00
Imported	lb.	7.00	7.75	7.75	7.00	7.75	7.00
Phenylethyl Alcohol 1 lb bot	lb.	4.50	4.75	4.75	4.50	4.75	4.50
Phenyl Ethyl Acetate	lb.	8.25	8.75	8.75	8.25	8.75	8.25
Butyrate 1 lb bot	lb.	15.00	16.00	16.00	15.00	16.00	15.00
Formate, 1 lb bot	lb.	19.00	21.00	21.00	19.00	21.00	19.00
Propionate, 1 lb bot	lb.	16.00	18.00	18.00	16.00	18.00	16.00
Valerate, 1 lb bot	lb.	19.00	20.00	20.00	19.00	20.00	19.00
Phenylpropylalcohol, 1 lb bot	lb.	12.00	12.50	12.50	12.00	16.00	12.00
Skatol, 1 oz bot	lb.	4.50	7.00	7.00	4.50	7.00	4.50
Terpinyl Acetate, 25 lb cans	lb.	.75	.80	.80	.75	.80	.75
Imported, 25 lb cans		.85	.90	.90	.85	.90	.85
TERPINEOL, CP, 1000 lb drs	lb.	.27	.29	.35	.27	.35	.33
50 lb cans	lb.	.31	.33	.39	.31	.39	.37
Absolute, 25 lb cans	lb.	.48	.50	.50	.48	.50	.48
Imported, 25 lb cans	lb.	.58	.60	.60	.58	.60	.58
Vanillin (Clove Oil), USP	lb.	6.25	6.80	7.00	6.00	7.50	7.00
(Guaiacol) USP	lb.	6.00	6.55	7.15	7.15	7.70	7.15

R. SORNIN & CIE.

Established 1826

GRASSE — FRANCE

Headquarters for--

OIL LAVENDER
OIL BERGAMOT
OIL GERANIUM

-- RESINOIDS --

OAK MOSS - PATCHOULY - VETIVERT

Compounded Perfume Bases for All Purposes and Reasonably Priced

Sole American and Canadian Distributors

NEWPORT CHEMICAL WORKS, INCORPORATED

SUCCESSOR TO

Rhodia Chemical Company

21 SPRUCE STREET, NEW YORK — Works: New Brunswick, N. J.

Chicago Branch Office: 605 W. Washington Blvd. — Clayton F. Shoemaker, Phila. Rep., 689 Drexel Bldg.

HONEYSUCKLE de FRANCE

Gives with perfect accuracy the sweet tenacious perfume of the Honeysuckle blossom.

Aromatic Chemicals -- Absolute Flower Oils
Lavender Oil, All Grades

New stocks, low prices

BENJ. FRENCH, INC.

CHICAGO
Mr. A. S. La Zoris
208 North Wabash Avenue

Agents for
DESCOLLONGES FRERES
Lyon, France

NEW YORK
160 Fifth Avenue

Agents for
PILAR FRERES
Grasse, France

{ Monthly Review }

September	7	1.04 to 1.06
"	14	1.04 " 1.08
"	21	1.07 " 1.11
"	28	1.07 " 1.11

The export figures during the quarter from the island amounted to 788,658 pounds, with a value of $286,964, against 388,041 pounds, valued at $127,544 for the same period last year. The declared exports to the United States were 117,094 pounds, with a value of $39,240.

Lime Oil Demand Slackens

Lime oil has experienced a considerable falling off in demand due to the exceptionally high price at which it had been selling. The price, having risen above $20 per lb. became prohibitive with the result that manufacturers of products containing lime oil have diverted attention and demand to products with other flavors. This has caused a recession in the price of this oil to $19.50. Lime oil at this figure is still very high so that the consumers method of combating the high price will have to be continued in order to bring this commodity within a more reasonable range.

It must be understood, however, that a high price on this oil will prevail in spite of any restriction placed on its consumption due to circumstances prevailing in the production fields. Production of limes have been greatly curtailed by severe hurricanes which destroyed many trees. An unknown disease has also attacked the trees; the only known method of combating it being to destroy the tree entirely and replant. This has been done to thousands of trees and as several years must elapse before these new plantings bear fruit a continued shortage must be expected.

It would seem, though, that advantage has been taken of this situation to run the price up even higher than circumstances would warrant. The primary market has undoubtedly overestimated the importance of this oil. Where an oil can be substituted or temporarily disregarded it would seem unwise for manipulation to be extended too far. This evidently has been done but the reaction that has set in will undoubtedly go far to correct this condition.

Cassia and Anise Exports

The total declared exports from Hong Kong to continental United States of cassia, cassia oil, anise oil, and Chinese medicines during the third quarter and also during the first nine months of 1929 as compared with the same period of the previous year are as follows:

	3d Quarter 1928 Value	*3d Quarter 1929 Value*	*9 Months 1928 Value*	*9 Months 1929 Value*
Cassia	55,907	73,702	215,537	211,706
Chinese Medicines	107,522	113,285	323,785	318,995
Cassia Oil	35,844	29,228	83,642	99,102
Anise Oil	12,257	8,872	46,611	79,550

Peppermint oil seems to be well stabilized at $3.35 per lb. Attempts to buy lower, it is reported, have met with stiff resistance. Demand is but normal which is another indication of the underlying strength that prevails on this oil.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Valerianic Ether see Ethyl Valerate					
Yara Yara, 1 lb cans lb.	1.50	1.60	1.50	1.60	1.50

Essential Oils

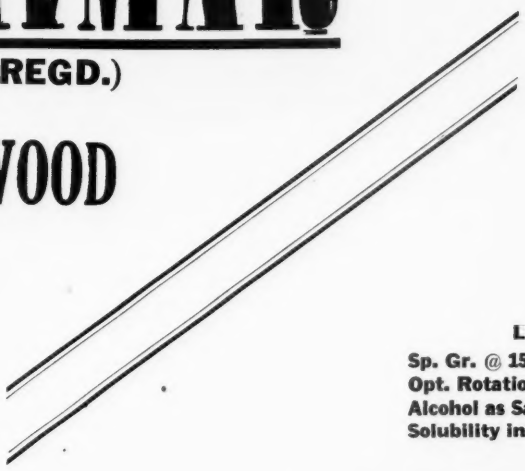
Almond Bitter, USP, 5 lb bot lb.	2.75	2.85	2.85	2.70	2.80	2.70
Bitter, ffPA, 5 lb bot lb.	2.85	2.95	3.10	2.85	3.25	3.00
Sweet, 56 lb cans lb.	.65	.68	.85	.65	.85	.73
Amber crude, 25 lb tins lb.	.33	.35	.35	.33	.35	.33
Rectified, 25 lb tins lb.	.52	.55	.55	.52	.55	.52
Angelica Root, 1 lb bot lb.	21.00	23.00	24.00	21.00	28.50	16.00
Anise Tech, 400 lb drums lb.	1.10	1.15	1.15	.55	.58	.54
USP, 60 lb cans lb.	1.15	1.16	1.16	.58	.61	.57
Apricot Kernel, 50 lb cans lb.	.37	.39	.46	.37	.50	.44
Bay, 25 lb tins N. F. V., 50.55% Phenol lb.	2.40	2.60	3.00	2.30	3.00	1.90
Terpeneless lb.	5.80	6.00	6.00	5.80	6.00	5.80
BERGAMOT, 25 lb coppers lb.	3.25	3.65	5.35	3.25	6.10	4.85
Terpeneless lb.	14.00	18.00	18.00	14.00	18.00	14.00
Artificial, 25 lb cans lb.	2.50	3.25	3.25	2.50	3.25	2.50
Birch, Sweet, Northern, 25 lb tins lb.	3.75	4.00	4.00	3.75	4.00	3.75
Southern, 25 lb tins lb.	.....	1.95	1.95	1.95	1.95	1.95
Birch Tar, rect., 5 lb bot lb.	.50	.55	.55	.50	.55	.50
Crude, 50 lb tins lb.	.12	.13	.13	.12	.13	.12
Bois de Rose, tins						
Brazillian lb.	1.55	1.60	1.70	1.55	2.00	1.80
Cayenne, tins lb.	1.90	2.00	2.35	1.90	2.60	2.05
Cade, 25 lb cans lb.	.25	.27	.27	.25	.27	.25
Cajuput, native, 50 lb tins lb.	.75	.80	.88	.70	.75	.70
Calamus, 5 lb bot lb.	3.40	3.50	3.50	3.40	3.50	3.40
Camphor Sassa, 1000 lb drs lb.	.29	.30	.36	.14½	.15½	.14½
White, 400 lb drs lb.	.40	Nom.	.40	.10½	.12½	.10½
Cans, 50 lbs lb.	.35	Nom.	.35	.14	.15	.14
CANANGA, Native 25 lb tins lb.	2.90	3.15	3.25	2.90	3.50	3.00
Rectified, 25 lb tins lb.	3.30	3.40	3.50	3.30	4.00	3.40
Caraway, USP lb.	1.85	1.95	2.00	1.65	1.85	1.65
Cardamon, NF, 1 lb bot lb.	26.00	39.00	39.00	25.00	38.00	25.00
Cascarilla, USP, 1 lb bot lb.	75.00	90.00	90.00	50.00	64.00	50.00
Cassia,	.....	.....	.....	.....	1.45	1.30
Redist, USP, 50 lb cans lb.	1.40	1.45	2.10	1.40	3.25	1.70
Cedar Leaf, 50 lb tins lb.	1.05	1.10	1.10	.95	1.35	.90
Cedar Wood, light, 1000 lb drs lb.	.25	.27	.28	.25	.29	.24
Celery, 1 lb bot lb.	.....	7.75	7.75	7.75	8.50	7.25
Chaulmoogra, USP 80 lb cases lb	.....	1.50	1.50	1.20	1.20	1.20
Cinnamon Ceylon, 1 lb bot lb.	9.50	13.00	13.00	9.50	13.00	9.75
Leaf, 5 lb bot lb.	1.85	1.95	1.95	1.60	1.75	1.60
CITRONELLA Ceylon, 1000 lb drs lb.	.59	.61	.61	.44	.56	.33
50 lb tins lb.	.61	.62	.62	.46	.58	.35
Java, 400 lb drs lb.	.77	.82	.91	.49	.51	.40
50 lb tins lb.	.79	.84	.93	.52	.54	.43
Cloves, USP, 50 lb cans lb.	1.75	1.80	2.70	1.75	2.65	1.25
6 lb bot lb.	2.20	2.25	2.90	2.20	2.75	1.35
Copaiba lb.	.....	.65	.80	.65	.80	.65
Coriander, USP, 10 lb bots lb.	5.90	6.50	11.25	5.90	14.00	10.50
Croton USP, 25 lb tins lb.	3.10	3.15	3.15	.90	.95	.90
Cubebs, USP, 5 lb bot lb.	2.90	3.00	3.00	2.90	3.45	2.90
Cumin, 1 lb bot lb.	.....	3.75	3.75	3.75	3.75	3.75
Dill, 25 lb cans lb.	3.75	3.85	3.85	3.75	4.25	3.75
Erigeron, 20 lb tins lb.	1.80	1.90	1.90	1.80	2.50	1.80
EUCALPYTUS Austl, USP, 56 lb cans, cases lb.	.51	.52	.60	.51	.60	.59
500 lb drs lb.	.50	.51	.59	.50	.59	.58
Fennel, USP, 25 lb tins lb.	.80	.90	.85	.80	.85	.80
Geranium African, 25 lb tins lb.	5.15	5.40	5.40	3.85	4.25	3.00
Bourbon, 28 lb tins lb.	4.65	4.90	5.85	4.25	4.90	3.00
Turkish, 28 lb tins lb.	3.25	3.35	3.35	3.00	3.35	2.45
Ginger, 1 lb bot lb.	6.60	6.85	6.85	6.00	6.75	4.80
Gingergrass, 28 lb tins lb.	2.50	2.70	2.70	2.50	2.70	2.50
Hemlock, 25 lb tins lb.	1.05	1.10	1.10	1.05	1.10	1.00
Juniper Berries, USP, 25 lb tins lb.	2.05	2.10	2.15	2.05	3.75	2.10
Wood, 50 lb tins lb.	.50	.60	.60	.50	.60	.50
LAVENDER, USP, 28 lb tins lb	3.25	3.40	3.40	3.25	3.85	3.00
Spike Spanish, 50 lb cans lb.	.90	.95	.95	.90	1.05	.90
Lemon Ital, 25 lb cans lb.	2.75	3.40	5.75	2.75	4.85	2.30
California 35 lb cbys lb.	2.05	2.25	4.65	2.05	4.35	1.85
Lemongrass, native, 50 lb cans lb.	.72	.74	.83	.81	.95	.81
Limes, expressed, 25 lb tins lb.	19.50	22.50	28.00	19.50	25.00	9.25
Distilled, 25 lb tins lb.	8.50	8.75	9.75	7.75	8.50	6.00
Linaloe Mex., 70 lb cases lb.	2.20	2.25	2.25	2.20	2.45	1.90
Mace, distilled, 50 lb tins lb	1.75	1.80	1.80	1.75	1.85	1.60
Mandarin, 25 lb cases lb.	8.75	9.25	11.50	8.75	11.50	7.50
Mirbane, ref Aromatic Chemicals						
MUSTARD, USP, 1 lb bots lb.	9.50	10.00	10.00	9.50	10.00	9.50
Artif, USP, 5 lb bot lb.	1.60	1.70	1.70	1.60	2.00	1.60
Neroli Bigarade, ½ & ¼ & 1 lb bot lb.	150.00	325.00	325.00	75.00	140.00	75.00
Petale, 1 lb bot lb.	160.00	170.00	170.00	160.00	170.00	160.00
Artificial, 1 lb bot lb.	5.00	15.00	15.00	5.00	15.00	5.00
Nutmeg, USP, 50 lb tins lb	1.75	1.80	1.80	1.75	1.80	1.60
ORANGE BITTER, 25 lb tins lb	3.50	3.75	6.75	3.50	8.75	2.70
Sweet W Ind, 25 lb tins lb	3.10	3.35	6.50	3.10	8.75	2.60
Italian, 25 lb cop lb.	3.35	3.65	7.35	3.35	9.00	2.80

PLAIMAR

(REGD.)

SANDALWOOD OIL

DISTILLED BY
PLAIMAR, Ltd.
PERTH, W. A.



TO PROTECT YOURSELF AND US LOOK FOR THE

PLAIMAR

SEAL ON EVERY TIN

Pronounced Therapeutically Equal to Oil of Santalum Album and Physiologically Superior.

LIMITS OF ANALYSIS:

Sp. Gr. @ 15.5°	0.968 to 0.975
Opt. Rotation $_{AD}$	-4° to -16°
Alcohol as Santalol	90% to 95%
Solubility in 70% Al.	1 in 3 to 1 in 6 Vols.

American Agents:

THE IMPERIAL EXPORT COMPANY, Inc.

11 Moore Street — New York, N. Y.

Telephone: Whitehall 7622

Announcement!

We beg to announce that we have completed negotiations whereby all of our

Cold Pressed Oil of Lemon
Cold Pressed Oil of Orange
Distilled Oil of Orange

will hereafter be distributed to the American market exclusively through

FRITZSCHE BROTHERS, Inc.
78-84 Beekman St., New York City

and

DODGE & OLCOTT COMPANY
87 Fulton St., New York City

These Exchange Produced Oils have rapidly been coming into favor with manufacturers everywhere. Write the above jobbers to-day for samples.

PRODUCTS DEPARTMENT

CALIFORNIA FRUIT GROWERS EXCHANGE

ONTARIO, CALIFORNIA

PLANTS

THE EXCHANGE ORANGE PRODUCTS CO.
ONTARIO, CALIFORNIA

EXCHANGE LEMON PRODUCTS CO.
CORONA, CALIFORNIA

{ *Monthly Review* }

Citrus Oils Continue Weak

The citrus oil situation still seems to be the sore spot in the essential oil market. Prices on lemon oil are again lower with the Italian selling at $2.75 to $3.40 for good quality, and the California oil at $2.05 and $2.25 as to quantity. It is reported, however, that an increasing number of buyers are willing to contract at these figures and a good percentage of contracts have already been closed. The Californian oil is reported as being an especially good quality and rather attractive at these levels.

Orange oil, Italian, is being offered in the spot market at $3.35, a decline in the past month of 15c per lb. American, cold pressed also declined to $3.50, the distilled being offered at $2.05.

A shipment of orange oil arrived in this market from Porto Rico, a new source for this oil. It is reported, however, that this oil is not of a particularly good quality so that it will probably not have the effect of further weakening the situation here. St. Thomas has also sent in some oil which is reported to be of prime quality.

In both of these oils, however, the present time is that of the extreme weakness of the year. The Italian crops finish in late January and from that time on until the Spring and Summer heavy consuming demand prices normally advance. Although it is quite possible that prices will go lower during the Spring, this should not be anticipated from past performances of most years. The present appears to be the proper time for covering at least a goodly part of the year's requirements on these oils.

Exports of American orange oil for October amounted to 628 pounds, valued at $2,685, making the total for the first ten months of 1929, 40,915 pounds, valued at $152,400. Imports of orange oil for October amounted to 18,576 pounds, valued at $47,880, making the total for the first ten months of 1929, 166,850 pounds valued at 729,470.

Imports of lemon oil for October amounted to 10,032 pounds, valued at $28,342, making the total for the first ten months of this year 307,355 pounds, valued at $1,011,412.

Anise Oil Higher

Anise continues its upward trend with price now quoted $1.10, $1.15 per lb., a higher price than has existed since 1920. Anise is gathered in small lots in the interior of China. The political unrest existing in that country, however, has made it practically impossible to get the material out to the shipping ports. As a result exporters have practically stopped shipments entirely and it is not known when material will again be offered for sale.

Cassia, as a result of competition, has sold down to $1.40 per lb. Demand has not been strong and a desire on the part of dealers to dispose of some of their stock of this commodity has caused a shading in quotations.

Coriander is definitely lower at $5.90 per lb. due to lower cost of production. Dealers report demand satisfactory and buyers ready to accept this figure.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Orange American, Cold pressed 25 lb tins ..... lb.	3.50	3.75	7 40	3.50	8.75	3.50
Distilled, 25 lb tins..... lb.	2.05	2.15	5.25	2.05	7.75	2.20
Spanish, 25 lb tins..... lb.	3.85	4.00	7.15	3.85	8.75	3.00
Oil Orris, concrete..... oz.	6.00	6.25	6.25	2.50	4.90	2.50
Origanum, 50 lb cans tech... lb.	.28	.30	.30	.28	.30	.28
Parsley, 1 lb bot..... lb.	9.00	9.25	9.25	8.00	8.25	6.50
Patchouli, 5 lb bot..... lb.	8.25	8.50	8.75	6.75	13.00	7.25
Pennyroyal, dom, 25 lb tins.. lb.	1.55	2.10	2.10	1.55	1.90	1.55
Imported, 25 lb tins..... lb.	.....	1.20	1.20	1.20	1.55	1.20
Pepper Black lb.....	10.25	.....	.....	.....	.....	.....
Peppermint, nat. 60 lb cases lb.	3.35	3.45	4.05	2.85	3.55	3.10
Redis, USP, 60 lb cs..... lb.	3.55	3.65	4.30	3.10	3.65	3.40
Petit Grain S A., 25 lb tins.. lb.	1.95	2.05	2.05	1.90	2.10	1.50
French, 1 lb bot..... lb.	6.25	6.50	6.50	6.25	6.50	6.25
Italian, 25 lb tins..... lb.	2.20	2.30	2.30	2.20	2.30	2.20
Pimento, 25 lb tins..... lb.	2.50	2.75	2.75	2.25	3.25	2.55
Pineedle Siberian, cans..... lb.	.70	.75	.75	.60	.85	.65
Pinus, Sylvestris, 25 lb tins.. lb.	1.90	2.00	2.00	1.90	2.00	1.90
Pumilio, USP, 25 lb tins... lb.	2.85	2.95	2.95	2.85	2.95	2.85
Rose Fr, 8, 16, & 32 oz pkgs.. lb.	14.00	17 00	17.00	12.00	15.00	12.00
Bulg, 8, 10 & 32 oz pkgs... lb.	14.00	14.50	14.50	11.50	13.00	10.25
Rosemary, USP, 27½ lb tins.. lb.	.....	.56	.56	.47½	.56	.47½
1000 lb drums..... lb.	.....	.50	.50	.42½	.45	.42½
Tech, 25½ lb tins..... lb.	.....	.40	.40	.40	.34	.34
Rue, 1 lb bot..... lb	3.15	3.25	3.25	3.15	3.25	3.15
SANDALWOOD, E Ind, USP, 100 lb case..... lb.	9.35	9.85	9.85	7.45	7.50	7.05
W Indian (Amayris), 25 lb tins..... lb.	2.85	2.95	2.95	2.25	2.65	2.30
Sassafras, USP, 50 lb cans... lb.	1.30	1.32	1.32	.78	.85	.75
Artificial, 1000 lb drs, 60 lb cans..... lb.	.34	.36	.40	.26	.28	.26
Safrol, cans..... lb	.41	.43	.48	.28	.29	.28
Savin, 50 lb tins..... lb	2.50	2.65	2.75	1.65	1.90	1.70
SPEARMINT, USP, 50 lb tins ..... lb	4.65	4.70	4.70	4.05	4.55	4.10
Spruce, 50 lb tins..... lb	1.05	1.10	1.10	1.05	1.10	1.00
Tansy, American, 25 lb tins.. lb.	3.75	4.00	4.00	3.75	4.50	3.75
Tar, 50 gal bbls..... lb.	.25	.30	.30	.25	.30	.25
USP, 50 gal bbls..... lb.	.75	1.50	1.50	.75	1.50	.75
Thyme, red, NF, 25 lb tins.. lb.	.78	.80	.90	.78	.90	.80
White, NF, 25 lb tins..... lb.	.83	.85	.90	.83	.90	.85
Tech, 110 lb drums..... lb.	.60	.70	.70	.60	.70	.60
Turpentine, USP, rect cbys.. lb.	.27	.30	.30	.27	.30	.27
Vetivert Bourbon, 10 bot.... lb.	6.25	6.50	6.50	6.25	6.75	5.85
Indian, 1 lb bot..... lb.	25.00	38.00	38.00	25.00	38.00	25.00
Java, 1 lb bot..... lb.	15.00	16.00	16.00	15.00	16.00	15.00
Wine, heavy, 1 lb bot..... lb.	1.65	1.75	1.75	1.65	1.75	1.65
WINTERGREEN Gaultheria, true, 25 lb tin..... lb.	8.00	10.00	10.00	8.00	10.00	8.00
Southern, 25 lb tins.... lb.	3.75	4.00	4.00	3.75	4.00	3.75
Synthetic see Methyl salicylate.....						
Wormwood, dom, 25 lb tins.. lb.	13.25	17.25	35.00	13.25	35.00	14.00
Wormseed, Balt, 25 lb tins... lb.	3.40	3.50	3.65	1.80	3.45	1.90
Ylang Ylang Bourbon, 10 lb tins No. 1..... lb.	9.00	9.25	9.75	9.25	10.50	8.50
10 lb tins No. 2..... lb.	8.25	8.50	8.50	8.25	8.50	6.75
Manila, 1 lb bot..... lb.	30.00	40.00	40.00	30.00	32.00	30.00

Oleoresins

Aspidum, USP, bot and tins.. lb.	.....	1.25	1.45	1.25	2.10	1.50
Capsicum, USP, bot and tins.lb.	3.50	4.25	4.25	3.50	4.25	3.50
Cubeb, USP, bot and tins.... lb.	3.00	3.25	3.25	3.00	3.25	3.00
Ginger bot and tins..... lb.	2.85	3.35	3.35	2.85	3.35	2.25
Malefern see Aspidum.....						
Orris, bot & tins..... lb.	15.00	18.00	18.00	15.00	18.00	15.00
Pepper, black, USP, bot & tin ..... lb.	.....	9.50	9.50	9.50	.....	.....
Vanilla, bot & tins..... lb.	8.00	8.75	8.75	8.00	8.75	8.00

Perfumer's Sundries

Almond Meal, 25 lb cans.... lb.	.20	.21	.21	.20	.21	.20
Amber liquid, 400 lb drs..... lb.	2.20	2.30	2.30	2.20	2.30	2.20
Ambergris, Black, boxes..... oz.	14.00	15.00	15.00	14.00	15.00	14.00
Gray boxes..... oz.	32.00	36.00	36.00	32.00	36.00	32.00
BALSAM COPAIBA Para, 80 lb cases..... lb.	.....	.33½	.34	.30	.49	.32
South American, USP, 80 lb cases..... lb.	.....	.37	.37	.3	.52	.35
Peru, 120 lb cases..... lb.	2.00	2.00	2.05	1.75	1.80	1.65
Tolu, 90 lb cases..... lb.	1.25	1.30	1.30	1.15	1.20	.95
Benzoin Gum, Siam, boxes... lb.	1.20	1.30	1.30	1.20	1.30	1.20
Castoreum, 1 lb bot..... lb.	9.50	10.00	10.00	9.50	10.00	9.50
Chalk, Precip, 1 gt 175 bbls. lb.	.04½	.05	.05	.04½	.05	.04½
Cherry Laurel Water, 24 ltr cby ..... lb.	4.10	4.60	4.60	4.10	5.60	4.10
Civet, Abyssin, horns..... oz.	2.10	3.00	3.00	2.10	3.00	2.10
Labdanum, 5 lb bot..... lb.	5.50	6.00	6.00	5.50	6.00	5.50
Musk Pods Cabardine, tins.. lb.	.....	.....	.....	.....	.....	.....
Musk Tonquin, tins, Pods... oz.	24.00	26.00	26.00	24.00	26.00	24.00
Grains Cabardine, tins.... oz.	.....	.....	.....	.....	.....	.....
Tonquin, tins, Grained.. oz.	28.00	34.00	34.00	28.00	34.00	28.00
Synthetic See Aromatic Chemical.....						
Rice Starch, 140 lb bags.... lb.	.09	.10	.10	.09	.10	.09
Rose Water, 24 ltr cbys.. cby.	5.00	5.50	5.50	5.00	5.50	5.00
Sandalwood, pwd bags..... lb.	.22½	.40	.40	.22½	.40	.22½
Saponin, 5 lb tins..... lb.	1.15	1.30	1.30	1.15	1.30	1.15
Talc, Italian, 220 lb bags... ton.	60.00	80.00	80.00	60.00	80.00	60.00
French, 220 lb bags..... ton.	40.00	45.00	45.00	40.00	45.00	40.00

H.J. BAKER & BRO.

ESTABLISHED 1850

"STURGEON BRAND"
PRECIPITATED CHALK

manufactured by John & E. Sturge, Ltd., Birmingham, England

Uses: Specially prepared for Dentifrices, Cold Creams, Toilet Preparations.

Guarantees: Free from grit—Uniform.
Packed in casks and bags.

"VITAMOIL"

finest medicinal non-freezing

NORWEGIAN COD LIVER OIL

Refined by Albert Mohn, Bergen, Norway

GLYCERINE

Chemically Pure **Guaranteed B. P. Test**

Importers of all grades—Specializing in

English German Dutch
manufacture

Stocks available in New York City

THYMOL CALOMEL
BENZOIC ACID

Agents for Howards & Sons, Ltd., London, England

Spermaceti	Copper Sulphate
Magnesite (Grecian)	Senega Root
Magnesium Chloride	Epsom Salts
Formaldehyde	Borax
Oxalic Acid	Tri Soda Phosphate
Bicarbonate Potash	Manganese Sulphate
Barium Nitrate	

H.J. BAKER & BRO.

271 MADISON AVENUE
NEW YORK CITY

AROMATINTS

Perfume and color your "Para" and "Bath Salts" in one operation

Save time and money

Fast in Color

Moderate in price

Samples and further information upon request

WANGLER-BUDD CO., Inc.
205 West 14th Street
NEW YORK CITY
Telephones: Watkins 5615-6-7

CINCINNATI	ST. PAUL	WESTERN
J. A. Bauer	O'Brien & Bushnell	A. C. Drury & Co.
224½ E. 4th St.	2694 University Ave.	106 East Austin Ave.
Tel. Main 7712	Tel. Midway 4007	CHICAGO, ILL.
		Tel. Superior 3174

SAN FRANCISCO OFFICE
Marshall Dill
510 Montgomery St.

LOS ANGELES OFFICE
Marshall Dill
1904 Atlantic St.

Silver Label **Gold Label**

GELATINE

Pure Food and Technical

COIGNET GELATINES
17 State Street, New York City

CITRONELLAL

for Soap

Cheaper than Citronella Java
Goes Farther

A. M. TODD COMPANY
KALAMAZOO MICHIGAN

Business Established in 1869

{ *Monthly Review* }

Barbados Sends More Lime Oil

Exports of essential oil of lime, bay, orange, and grapefruit, and papain to the United States from Barbados, Dominica, St. Lucia, St. Vincent, Montserrat, Antigua, and St. Kitts-Nevis experienced both increases and decreases, according to Consul W. W. Brunswick, Barbados.

Dominica produces bay oil, lime oil, orange oil and grapefruit oil. St. Lucia produces lime oil, Montserrat a number of essential oils and papain, and Antigua lime oil.

In 1927 the exports of lime oil amounted to $184,694, whereas in 1928 it totaled $216,568, an increase of 17 per cent. This increase is explained by the very high price realized and the increased demand from the United States, due to unsettled conditions reported in the Mexican lime industry. For the first time since June, 1926, export statistics from Acapulca, Mexico, have been obtainable, and show that for the third quarter of 1929 distilled oil of lime exports to the United States were valued at $1,219.

Exports of bay oil from the Barbados district amounted to $12,075 in 1927, as compared with $8,564 in 1928. This represents a decrease of 41 per cent. in shipments. There are two reasons for the decrease—to obtain bay oil the trees are deprived of most of their branches and therefore can not throw out sufficient branches and leaves in two consecutive years, and better prices were obtained for bay oil in the United Kingdom markets.

Italian Oils Weak

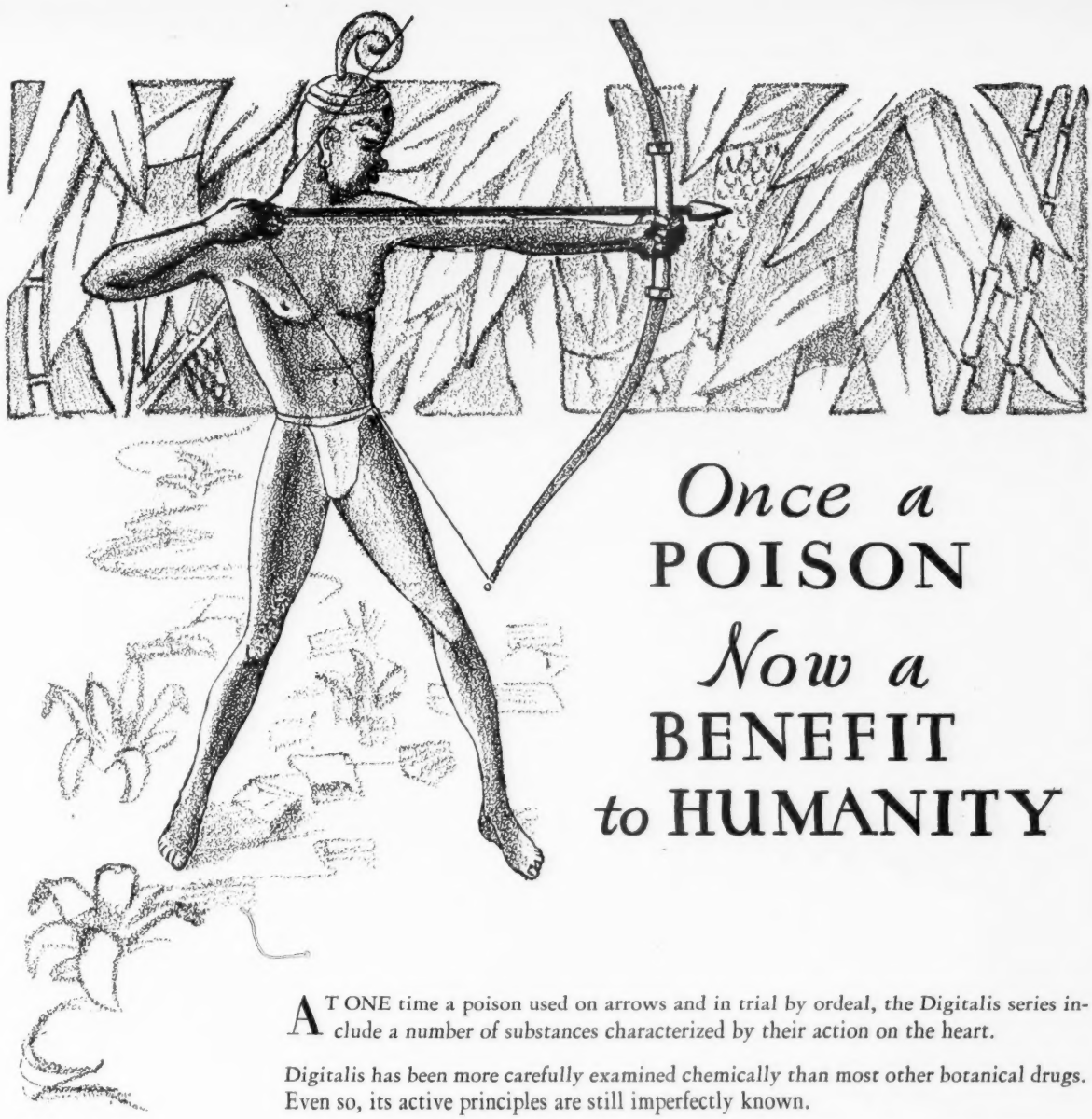
A cable from Naples to the Department of Commerce, dated December 3, stated that the essential oil market showed a downward tendency during November owing to a lack of foreign demand and to a heavy crop of lemons, mandarins, and bergamots. Palermo quotations on lemon oil dropped during the month from $2.80 to $2.44 per Sicilian pound c. i. f. New York. No. f. o. b. or c. i. f. New York prices are available in Messina but local price per Sicilian pound for the new lemon oil sponge process is 26 lire, with machine process 7 or 8 lire less (a reduction of 3 lire over the October figures quoted in the October cable); sweet orange 30 lire (a reduction of 10 lire); mandarin 40 lire (a reduction of 20 lire), and bergamot 35 lire (a reduction of 5 lire). Sicilian pounds equals 317 grams; November value of lire was $0.0524 United States Currency.

Wormwood, which has sold as high as $35.00, seems now to be getting back to normal. Spot quotations are $13.25 and $17.25 as to quantity. A very small crop in 1928 resulted in a scarcity that put this commodity at peak prices. These high prices have had the tendency to stimulate production to such an extent that a normal condition will probably prevail through the current year.

Exports of ipecac root to the United States from Brazil for the third quarter of 1929 through the port of Bahia, which after Carumba, Rio de Janeiro, and Victoria accounts for the bulk of the exports, amounted to 1,604 pounds, valued at $3,883, against 1,298 pounds, having a value of $3,216 for a similar period during 1929.

Drugs and Spices

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Aconite Root, USP, bags....lb.	.18	.19	.21	.18	.27	.19
Agar Agar, domestic, No. 1, 200 lb.....lb.	1.40	1.45	1.45	1.40	1.40	.96
Almonds Meal.....lb.	.19	.20	.30	.15	.30	.15
Aletris Root, bags.....lb.	.36	.37	.38	.35	.42	.36
Alkanet Root, bags.....lb	.13	.14	.15	.11	.12	.10
ALOES, Cape, 400 lb cases. lb.	.14	.15	.18	.14	.18	.09½
Curacao, 100 lb cases.....lb.	.25	.27	.27	.19	.20	.12
Socotrine, Whole, 300 lb cs lb.	.35	.40	.50	.35	.45	.35
Althea Root, bags.....lb.	.20	.22	.22	.20	.22	.20
Cut cases.....lb.	.30	.37	.40	.30	.40	.33
Angelica Root, bags.....lb.	.21	.22	.28	.21	.25	.18
Angostura Bark, bags.....lb.	.22	.25	.26	.19	.18	.18
Anise Star case.....lb.	.11	.11½	.19	.11	.26½	.14
Spanish, bags.....lb.	.13½	.14	.19	.13½	.20	.13
ARABIC GUM, White, No. 1, 220 lb bags.....lb.	.35	.36	.38	.22	.27½	.22
Seconds, 220 lb bags.....lb.	.33	.34	.36	.16	.21	.16
Sorts, Amber, 220 lb bags..lb.	.20	.22	.32	.11	.11½	.10½
Powd, USP, 300 lb bbls....lb.	.30	.32	.35	.17½	.21	.17½
Areca Nuts, 100 lb bbls.....lb.	.12	.14	.14	.10	.12½	.10
Powd, 100 lb bbls.....lb.	.25	.27	.27	.14	.21	.15
Arnica Flowers, bales.....lb.	.34	.35	1.00	.34	1.50	.95
Root, bags.....lb.	.45	.46	.46	.35	.45	.35
Arrowroot, St. Vincent, powd bbls.....lb.	.10	.10½	.10½	.10	.10½	.10
Asafoetida, 250 lb cases.....lb.	.24	.27	.29	.23	.31	.25
Powd, 50 lb boxes.....lb.	.49	.50	.54	.46	.68	.50
Balm Gilead Buds, bags.....lb.	.35	.40	.40	.35	.40	.31
Balmony Herbs, bales.....lb.	.23	.25	.25	.18	.23	.18
Barberry Bark, of root, bags lb.	.18	.20	.20	.18	.32	.19
Bayberry Bark, bales.....lb.	.11	.12	.13	.10	.18	.12
Wax bbls.....lb.	.29	.32	.32	.29	.32	.29
BELLADONNA LEAVES, bales .....lb.	.18	.20	.20	.17	.23	.17
Root, bags.....lb.	.18	.19	.21	.18	.21	.19
Bees Wax, White, cases.....lb.	.55	.60	.60	.55	.60	.55
Yellow refined cases.....lb.	.41	.42	.42	.41	.42	.41
Berberis Aquafolium Root, bags .....lb.	.09	.10	.12	.09	.13	.10
Beth Root, bags.....lb.	.16	.17	.18	.16	.20	.17
Black Indian Hemp Root, 100 lb bags.....lb.	.18	.19	.19	.18	.20	.18
Blood Root, bags.....lb.	.18	.18½	.18½	.17½	.35	.21
Blueflag Root, bags.....lb.	.18	.21	.21	.18	.27	.17
Boldo Leaves, bales.....lb.	.15	.17	.17	.15	.17	.15
Boneset Herb, bales.....lb.	.11	.12	.12	.10	.10	.07½
Borage Flowers, bales.....lb.	.15	.16	.15	.14½	.17	.14½
Broomtop Herb Cut, bales..lb.	.10	.11	.11	.10	.11	.10
Bryonia Root, bags.....lb.	.11	.12	.12	.11	.12	.10½
BUCHU LEAVES Short, 250 lb. bales.....lb.	.38	.39	.47	.36	.55	.42
Long bales.....lb.	.75	.80	.80	.75	.80	.75
Buckbean Leaves, bales.....lb.	.08	.09	.10	.08	.15	.13
Buckthorn Bark, bags.....lb.	.05	.05½	.05½	.05	.05½	.05
Berries, bags.....lb.	.40	.45	.50	.40	.50	.45
Burdock Root, bags.....lb.	.17	.18	.18	.13	.17	.11
Seed bags.....lb.	.40	.....	.65	.40	...	.65
Burgundy Pitch, 110 stand gross for net.....lb.	.08	.09	.09	.08	.09	.08
Imported.....lb.	.11	.12	.13	.11	.13	.12
Calabar Beans, bags.....lb.	.25	.26	.26	.22	.27	.22
Calamus Root, blchd cases..lb.	.45	.50	.52	.45	.50	.35
Unbleached, bags.....lb.	.06½	.08	.08	.06½	.07	.06½
Calendula Petals, imp bales..lb.	.95	1.05	1.70	.95	1.75	.85
Calisaya Bark, bales.....lb.	.19	.20	.22	.19	.23	.20
Powdered, bbls.....lb.	.24	.25	.27	.24	.32	.18
Canary Seed, South America, bags.....lb.	.07	.07½	.07½	.05	.05½	.04½
Dutch, bags.....lb.	.05½	.06½	.06½	.05½	.06½	.05½
Candelilla Wax, bags.....lb.	.27	.28	.28	.27	.28	.27
Cannella Alba Bark, bales...lb.	.30	.31	.31	.28	.32	.28
Cannabis, U.S.P.....lb	.23	.30	.33	.22	.....	.....
Cantharides, Chinese, cases..lb.	.42	.47	.55	.42	.72	.50
Powdered, boxes.....lb.	.63	.65	.80	.63	.88	.75
Russian, cases.....lb.	.50	.51	.55	.50	.70	.54
Powdered, boxes.....lb.	.62	.64	.75	.65	.80	.68
Caraway Seed, African, bags .....lb.	.05	.06	.06	.05	.12	.05
Dutch, 11 lb bags.....lb.	.10	.10½	.12	.09½	.12	.09½
Cardamon bleached, cases...lb.	1.45	1.55	1.75	1.45	2.00	1.50
Decorticated, cases.....lb.	1.35	1.40	1.60	1.35	1.60	1.25
Cascara Amarga, 150 lb bbls..lb.	Nom.	.....	.....	.....	.90	.90
So called bales.....lb.	.60	.85	.85	.60	.85	.60
CASCARA SAGRADA, 1926 bark.....lb.	.17	.18	.18	.15	.16	.15
1927 bark.....lb.	.15	.16	.16	.14	.15	.14
1928 bark.....lb.	.14	.15	.15	.13	.14	.13
Cascarilla Bark, quills, bales..lb.	.90	1.00	1.00	.90	1.00	.90
Siftings, bbls.....lb.	.65	.....	.65	.65	.65	.65
Cassia Batavia No. 1 bbls....lb.	.13½	.14	.15	.13½	.16	.13½
Shortstick, bales.....lb.	.10½	.11	.12½	.10½	.13	.11
Batavia No. 3, bales.....lb.	.09½	.09½	.11	.09½	.11	.09½
China Select Rolls, cases..lb.	.07	.07½	.09	.08½	.13½	.09
Broken, bales.....lb.	.09½	.10	.10	.09½	.10	.08½
Saigon, thin.....lb.	.30	.31	.39	.28	.39	.22
Buds, cases.....lb.	.25	.26	.28½	.16½	.19	.18½
Fistula, baskets.....lb.	.11	.12	.13	.10	.24	.11
Catnip, Herb, bales.....lb.	.19	.20	.23	.18	.23	.19
Celery Seed, bales.....lb.	.17½	.17½	.19	.16½	.21	.19
Ceresin Wax, White, bags...lb.	.15	.20	.20	.15	.20	.15
Yellow 200 lb. bags.....lb.	.11	.14	.14	.11	.14	.11
Imp. 100 lb. bags.....lb.	.25	.38	.38	.25	.38	.25



Once a POISON *Now a* BENEFIT *to* HUMANITY

AT ONE time a poison used on arrows and in trial by ordeal, the Digitalis series include a number of substances characterized by their action on the heart.

Digitalis has been more carefully examined chemically than most other botanical drugs. Even so, its active principles are still imperfectly known.

But experience has shown that care in picking, drying, packing and storing, materially affects the value of Digitalis from a pharmacological point of view—that is a maximum of therapeutic action with a minimum of side effects.

The particular care that must be used in selecting and handling Digitalis has long been a specialty of McIlvaine Brothers, Inc.

One of the most important of our specialties, if you use Digitalis you will be interested in the uniform quality of the grade we offer.

McIlvaine Brothers, Inc.

1500 Hamilton Street
Philadelphia

Cable Address "McIlvaine"

101 Beekman Street
New York

Drugs and Spices

{ Monthly Review }

Spanish Ergot Shows 12c Decline

Exports from Vigo, Spain, to the United States for the quarter ended September 30, 1929, of ergot of rye showed an average price decline of 12 cents per pound, compared with the price for the June quarter. The figures follow: second quarter, 11,138 pounds, valued at $8,054; third quarter, 13,644 pounds, valued at $7,543, according to Consul W. H. McKinney, Vigo.

Flea Seed in Active Demand

Flea seed continues to be very scarce. Price has advanced considerably during the past few months as stocks here are practically exhausted. The situation abroad is also causing anxiety as no material is being offered for shipment. Current market price is 32c to 35c per lb. and very firm at these figures. In comparing prices over a long period, 23c to 24c would seem to be normal for this product. The present movement started about June when the market was 20c to 21c per lb., the definite trend being established in November when flea seed advanced 8c per lb. to 30c. If the scarcity is as serious as it appears at this time no relief can be expected until a new crop is harvested next season and flea seed will probably go higher.

Cascara Sagrada is very firm in price with demand reported as good. As conservative stocks were carried into 1930 there is very little likelihood that an easier tendency will develop.

Cotton root bark is quoted at 13c and 14c per lb. and the market is firm at these figures. It is reported that new crop is such that stocks will not be replaced at lower figures.

Arnica flowers are in plentiful supply. The new crop has caused a recession in price to 34c to 35c per lb. Dealers report "a buyer's market" on this commodity.

Buchu leaves are lower at 38c to 39c per lb. Lack of demand is attributed as the reason for the easy market on this product. A rather brisk competition for what inquiries appear in the market is reported among dealers.

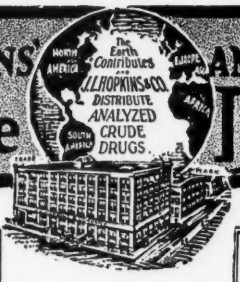
Spearmint is very scarce in the spot market. Price has increased to 32c and 37c per lb. Difficulty is experienced here by dealers in getting supplies, shipments coming in in irregular lots. No reports are obtainable from the primary market.

Chamomile flowers, Roman, have again advanced to 75c and 80c per pound. An extreme scarcity of this commodity is reported in the spot market, and this alone is attributed as the reason for this stiff advance, as demand is but routine. Hungarian flowers remain unchanged in price at 21c and 22c per pound.

Marjoram, especially French, is well held at this writing. Stocks are but moderate and, although price has not moved upward, the position of this commodity is very firm at current price of 18½c to 19c per lb.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
CHAMOMILE FLOWERS					
Roman, bales lb.	.75	.80	.80	.40	.50	.18
Hungarian, cases lb.	.21	.22	.26	.20	.24	.15
Charcoal Willow, powd, bbls. lb.	.06	.06½	.06½	.06	.06½	.06
Wood, powd, bbls lb.	.04	.05	.05	.04	.05	.04
Chestnut Bark lb.	.07	.08	.08	.07	.....	.....
Leaves bales lb.	.05	.05½	.05½	.05	.06½	.05
Chicle Gum, lb bbls lb.	.58	.75	.75	.58	.75	.58
Chiretta, bales lb.	.26	.28	.30	.26	.30	.25
Cinnamon, Ceylon, No. 1, bales lb.	.34	.35	.62	.34	.62	.60
No. 2 bales lb.	.33	.34	.51	.32	.61	.55
No. 3 bales lb.	.55½	.56	.56	.55½	.56	.55½
Clover Tops, Red, bags lb.	.10	.11	.14	.10	.12	.10
Cloves Zanzibar, 135 lb bbl lb.	.23½	.24	.38	.23½	.38	.18
Cochineal, Black lb.	.69	.....	.69	.69	.69	.69
Silver lb.	.85	.....	.85	.85	.85	.85
Cohosh Root, Black, bags lb.	.08	.09	.09	.07½	.09	.07
Blue, bags lb.	.10	.11	.12	.10	.12	.09
Colchicum Root, bags lb.	.10	.11	.11	.07	.07	.06
Seed, bags lb.	.95	1.00	1.00	.65	.70	.25
COLUMBO ROOT, bags lb.	.11	.12	.20	.11	.20	.05
Colocynth Pulp, bales lb.	.26	.27	.45	.29	.110	.42
Coltsfoot Leaves, bags lb.	.08	.09	.09	.08	.12	.08
Comfrey Root, bags lb.	.11	.....	.14	.11	.14	.14
Condurango Bark, bags lb.	.15	.16	.17	.15	.16	.13
Coriander Seed, Morocco, bags lb.	.03	.03½	.06	.03	.13	.05
Bleached, bags lb.	.07½	.08	.11½	.07½	.19	.11
Corn Silk, bales lb.	.05½	.06½	.06½	.05½	.06½	.05
Cotton Root Bark, bales lb.	.13	.14	.15	.12	.15	.12
Cowhage, 1 oz tins lb.	1.00	.....	1.00	1.00	1.00	.95
Cramp Bark so called bales lb.	.06½	.07	.08	.06	.08	.05½
True, bags lb.	.35	.40	.48	.35	.55	.34
Cranesbill Root, bags lb.	.10	.....	.10	.10	.12	.10
CUBEB BERRIES, XX bags lb.	.48	.53	.53	.48	.53	.48
Powdered, boxes lb	.50	.55	.55	.50	.55	.50
Culvers Root, bags lb.	.18	.19	.20	.18	.22	.18
Cumin Seed, Malta, bags lb.	.13½	.13½	.13½	.12	.15	.12
Morocco, bags lb.	.15	.15½	.16	.12	.15	.12
Cuttlefish, Bone Trieste, Straps lb.	.25	.25	.25	.14	.14	.13
French, boxes lb.	.22	.23	.23	.12½	.15	.12½
Powdered, bbls lb.	.09	.10	.10	.09	.10	.09
Broken, bales lb.	.07	.....	.07	.05	.05	.05
Damiana Leaves, bales lb.	.17	.18	.18	.16	.30	.16
Dandelion Root, Imp, bags lb.	.25	.27	.29	.19	.20	.14
Deer Tongue Leaves, bales lb.	.11	.13	.13	.11	.18	.10
Digitalis Leaves, bales lb.	.26	.28	.70	.26	.70	.30
Dogwood Bark, Jamaica bags lb.	.09	.10	.11	.09	.10½	.09
American bales lb.	.06½	.....	.06½	.06½	.06½	.06½
Doggrass Root, USP, cut bags lb.	.12	.13	.13	.10	.13	.10½
Dragons Blood Mass, cases lb.	.65	.70	.70	.65	.70	.65
Reeds, boxes lb.	.....	4.00	4.00	.90	.95	.95
Echinacea Root, bags lb.	.23	.25	.28	.23	.33	.26
Elcampane Root, bags lb.	.08	.09	.09	.08	.09	.08
Elder Flowers, bags lb.	.50	.55	.55	.22	.25	.19
Elemi Gum, 85 lb cases lb.	.26	.28	.28	.26	.28	.20
Elm Bark, bundles lb.	.35	.36	.40	.25	.27	.22
Grinding bags lb.	.13½	.14	.14	.13½	.14	.13½
Powdered, bbls lb.	.19	.22	.22	.19	.22	.19
Ephedra Vulgaris, bales lb.	.09	.10	.16	.09	.25	.15
ERGOT, 150-200 lb bags lb.	.60	.65	.95	.60	2.50	.80
Eucalyptus Leaves, bales lb.	.08	.09	.11	.07	.10	.06½
Euphorbia Pilulifera, Herb, bags lb	.06½	.07½	.11	.06½	.10	.07½
Euphorbium Gum, cases lb.	.14	.20	.20	.14	.20	.14
Fennel Seed, French, bags lb.	.14	.14½	.18½	.14	.25	.16½
German bags lb.	.17	.19	.27	.17	.32	.20
Foenugreek Seed, 200 lb bags lb.	.06	.06½	.06½	.05	.06	.04½
Fish Berries, 100-125 lb bag lb.	.06	.07½	.07½	.06	.07½	.06
Flax Seed, Whole 182 lb bbls.	16.25	17.00	17.00	14.00	14.75	14.00
Ground, 180 lb bbls lb.	.09	.09½	.09½	.08	.08½	.08
Flea Seeds Black bags lb.	.32	.35	.35	.20	.27	.16
Fringe Tree Bark or Root bags lb.	.19	.21	.24	.19	.27	.22½
Fumigating Pastiles, boxes lb.	.30	.35	.35	.30	.35	.30
Galangal Root, bags lb.	.14	.15	.15	.14	.15	.11
Galbanum Gum, cans lb.	.95	1.05	1.25	.95	1.25	1.00
Gamboge Gum, 100 lb cases lb.	1.10	1.15	1.25	1.10	1.35	1.10
Powdered, cases lb.	.....	1.25	1.40	1.20	1.50	1.20
Gelsemium Root, bags lb.	.09	.10	.12	.09	.13	.09
GENTIAN ROOT, bags lb.	.09	.10	.11	.09	.11	.09
Ground bbls, boxes lb.	.13	.14	.14	.13	.14	.11
Powdered, bbls, boxes lb.	.13	.14	.14	.13	.14	.12½
Ginger, African, bags lb.	.17	.17½	.17½	.13	.14½	.10½
Jamaica Grinding bags lb.	.19	.19½	.20	.18	.23	.17
Cochin ABC & Lemon, bags lb.	.18	.18½	.18½	.17	.20	.16
Ginseng Root, cultivated cs. lb.	8.00	10.00	10.00	8.00	10.00	8.00
Wild Southern, cases lb.	.....	16.00	16.00	16.00	16.00	8.50
Golden Seal Root, bags lb.	2.70	2.80	3.80	2.70	4.50	3.90
Powdered, boxes lb.	.....	3.25	4.35	3.25	5.25	4.60
Herb, barrels lb.	1.25	1.30	1.30	1.25	1.30	1.25
Grains of Paradise, bags lb.	.30	.40	.85	.30	.60	.40
Grindelia Robusta, Herb, bale lb.	.10	.11	.12	.09	.12	.08½
Guaiac Gum, 150 lb cases lb.	.34	.35	.38	.33	.40	.33
Strained 75 lb cases lb.	.70	.75	.75	.70	.75	.70
Guarana, tin cases lb.	2.75	3.00	3.00	2.50	2.75	1.65
Hellebore Root, Black, bbls. lb.	.05½	.06	.06	.05½	.06	.05½
White, 250 lb bbls lb.	.07½	.08½	.08½	.07½	.08½	.07½
Powdered lb.	.11	.12	.12	.11	.14	.11
Helonias Root, bags lb.	.63	.65	.72	.62	.80	.67
Hemp Seed, bags lb.	.05	.06	.06	.05	.07	.03½
Henbane Leaves, USP, bales lb.	.15	.16	.20	.15	.23	.18

HOPKINS' ANALYZED
Crude Drugs



Tested BOTANICALLY

Tested MICROSCOPICALLY

PINEALCO

Trade Mark Reg. U. S. Pat. Off.

(HOPKINS) SOLUBLE EXTRACT WHITE PINE COMPOUND

SYRUPUS PINI STROBI COMPOSITUS N. F. Produced extemporaneously from this Vacuum-made Extract insures a product true to formula and of full therapeutic value.

Our Special Vacuum process guarantees the preservation of the physical properties of the product as well as the characteristic flavor and odor.

In 5, 10, 25 and 50 lb. Tins.

Each pound Pinealco yields 20 pints of Syrup White Pine Compound N. F.

J. L. HOPKINS & COMPANY

Importing Drug Merchants

135 William St.
New York

Tested CHEMICALLY

Tested PHYSIOLOGICALLY

In Philadelphia Your Choice Should Be

THE HOTEL MAJESTIC

BROAD ST. AND GIRARD AVE.
PHILADELPHIA

400 LARGE ROOMS

only Hotel in Philadelphia with a subway entrance from main lobby

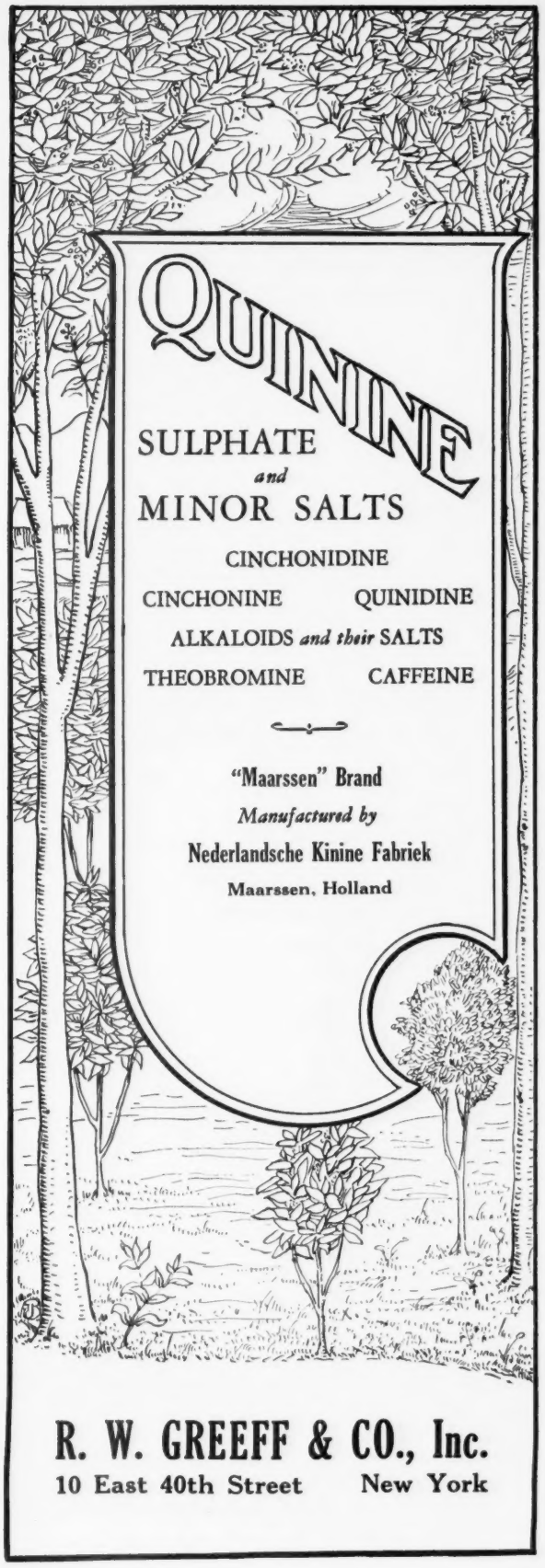
MOST MODERATE RATES!

Single room, running water $2
for two $3.50
Single room, private bath $3
for two . . . $5-$6

Garage connected with hotel

WIRE AT OUR EXPENSE
for RESERVATIONS!

JNO. C. GOSSLER
Mgr. Dir.



R. W. GREEFF & CO., Inc.

10 East 40th Street New York

Drugs and Spices

{ Monthly Review }

Cultivated Ginseng Prejudice Subsiding

During 1924, the last year for which import statistics were compiled, the total imports of ginseng into Hong Kong were valued at $4,015,800 as compared with $4,119,480 in 1923. The principal source of supply was the United States, which furnished ginseng valued at $2,565,870 in 1924. Imports from North China in the same year were valued at $1,230,280 and those from Java, Korea, and Formosa were valued at $229,430.

Exports of ginseng from the United States during the last five years and the first six months of 1929 were valued at $3,399,926, $1,668,221, $3,640,438, $2,556,342, $2,287,817, and $2,038,000, respectively.

The wild ginseng is preferred and commands a high price, although the prejudice against the cultivated root, which is not considered, so strong as the wild root, is said to be gradually dying out. On October 1, 1929, the following wholesale prices of American ginseng were quoted by one of the large importers in Hong Kong. The prices have been converted into American currency per pound:

	Wild Ginseng	*Cultivated Ginseng*
First grade	$24	$13
Second grade	23	11
Third grade	22	10
Fourth grade	21	7

As a rule, American ginseng is shipped by Chinese brokers in the United States to Chinese dealers in Hong Kong, which is practically a free port, on a consignment basis. The local dealers do not deal direct with American exporters as most of them have Chinese connections in the United States.

U. S. Takes Most Nutgalls

China's exports of nutgalls in 1927, the latest year for which statistics covering the whole of China are available, amounted to 6,830 tons, valued at $1,155,000. Of this amount, the United States took 26 per cent.; Great Britain, 12 per cent.; Belgium, 11 per cent.; Hong Kong, 11 per cent.; Germany, 11 per cent.; Japan, 8 per cent.; France 8 per cent.; and the Netherlands, 7 per cent. Chungking, Hankow, Yochow, and Wanshien, all in the Yangtze Valley, are the principal ports of original export. Hankow, however, is by far the largest center as regards exports to foreign countries. In 1928 the exports, including re-exports, of nutgalls from Hankow amounted to 4,025 tons, valued at $714,000. The declared exports from Hankow to the United States in 1928 amounted to 1,168 tons, valued at $274,000. Whereas the exports for the first eight months of the current year amount to 702 tons, valued at $149,000.

The price of plum-shaped nutgalls, October 1, 1929, was about 11¼ cents United States currency per pound, c. i. f. New York. The local market has been firm for some time at about 19 Hankow taels per picul (one Hankow tael equals about $0.55 United States currency; one picul equals 133⅓ pounds.) (Consul General F. P. Lockhart, Hankow.)

According to Consul A. E. Carleton, San Salvador, the declared exports of balsam for the nine months of 1929 amounted to 52,600 pounds, valued at $54,000, against 56,000 pounds, valued at $50,700, for a similar period during 1928.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
HENNA LEAVES, bales....lb.	.12	.13	.13	.12½	.13	.12½
Powdered.....lb.	.15	.16	.17	.15	.17	.16
Hops, bales.....lb.	.....	.23	.32	.23	.32	.25½
Horehound, Herb, bales.....lb.	.08	.09	.09	.08	.09	.07
Hydrangea Root, bales.....lb.	.....	.09	.09	.08	.09	.08
Insect Flowers.....lb.	.27	.28	.37	.18	.35	.22
Powdered, Pure, 200 lb bb ..... lb.	.34	.35	.46	.25	.45	.32
IPECAC ROOT, Carteagna, bags.....lb.	4.00	4.25	4.25	2.70	3.30	2.35
Powdered, 220 lb bbls....lb.	4.30	4.45	4.45	3.20	3.65	3.15
Rio Whole, bags.....lb.	3.80	4.00	4.00	2.85	3.40	2.80
Powdered, 110 lb bbls....lb.	3.40	3.50	3.50	3.40	3.50	3.25
Isinglass, American, 130 lb cases ..... lb.	.95	1.00	1.00	.95	1.00	.95
Russian (Beluga), boxes....lb.	4.50	.....	4.50	4.50	4.50	4.50
Jaborandi Leaves, bales.....lb.	.22	.22½	.22½	.11½	.13	.13
Jalap Root, Whole, 150 lb bag.....lb.	.40	.43	.45	.24	.21	.16
USP, Powd, 250 lb bbls....lb.	.45	.48	.50	.29	.26	.22
Japan Wax 24 lb cases....lb.	.18½	.19	.19	.18½	.19	.18½
JUNIPER BERRIES, 125 lb bags.....lb.	.06½	.07	.09	.05	.07½	.05
Kamala, boxes.....lb.	1.15	1.25	1.40	.82	1.00	.85
Karaya Gum, Powdered, bbls ..... lb.	.12	.20	.20	.12	.13	.12
Kava Kava Root, bags.....lb.	.14	.15	.15	.14	.16	.15
Kino Gum, Black, cases.....lb.	.50	.55	.55	.50	.55	.50
Kola Nuts, 150 lb bags.....lb.	.14	.15	.15	.13	.15	.09
Lady Slipper Root, bags....lb.	1.10	1.15	1.30	.85	1.75	.78
Larkspur Seed, bags.....lb.	.52	.57	.57	.40	.45	.30
Laurel Berries, bags.....lb.	.08	.09	.09	.08	.09	.08
Leaves, Greek, bags.....lb.	.05½	.06	.06	.05	.07	.04½
Italian, bales.....lb.	.03½	.04	.04	.03½	.05	.03½
Lavender Flowers, Ordinary.lb.	.32	.35	.35	.32	.35	.30
Selected.....lb.	.45	.46	.46	.43	.55	.40
Lemon Peel, bags.....lb.	.09½	.10½	.13	.10	.10	.09½
LICORICE ROOT, Whole bbls ..... lb.	.12	.18	.18	.12	.18	.12
Spanish Natural bales....lb.	.05½	.07	.07	.05½	.07	.05½
Powdered, bbls.....lb.	.09	.10	.10	.09	.10	.09
Selected 2 & 5 lb bdls....lb.	.13	.15	.15	.12½	.16	.12½
Cutting, 125 lb bags....ln.	.06½	.07	.07	.06½	.07	.06½
Turkish, 150 lb bales....lb.	.05	.....	.05	.05	.05	.05
Linden Flowers with leaves, bales.....lb.	.23	.24	.27	.23	.33	.29
Without leaves, bales...lb.	.28	.29	.32	.28	.36	.27
Liverwort Leaves, bales.....lb.	.18	.19	.20	.18	.20	.16
Lobelia, Herb, bales.....lb.	.12	.13	.16	.12	.20	.15
Seed, bags.....lb.	.45	.50	.65	.45	.75	.65
Lovage Root, Imp., bags....lb.	.35	.37	.37	.25	.27	.25
Lupulin N. F., tins.....lb.	1.65	.....	1.75	1.65	1.75	1.75
Lycopodium, 88 lb. cases....lb.	.66	.68	.85	.66	1.00	.70
MACE SIAUW, No. 1, cases ..... lb.	.80	.82	.86	.80	.98	.88
Banda No. 1, cases.....lb.	.85	.86	.98	.85	1.00	.94
Batavia No. 2, cases.....lb.	.47	.50	.58	.47	.68	.56
Malva Flowers, Blue, bales..lb.	.55	.57	.57	.40	.70	.45
Black, bales.....lb.	.40	.55	.60	.40	.60	.45
Leaves, bales.....lb.	.14	.15	.15	.14	.15	.14
Manaca Root, bales.....lb.	.....	.24	.24	.22	.22	.22
Manna, Large Flake, cases...lb.	.90	.92	.92	.75	.80	.65
Small Flake, cakes.....lb.	.57	.60	.65	.52	.60	.50
Sorts, cases.....lb.	.45	.50	.50	.45	.50	.45
Mandrake Root, bags.....lb.	.12	.13	.14	.12	.18	.13
Marjoram, Herb.....						
French, No. 1 bales.....lb.	.18½	.19	.19	.16	.18½	.13½
German, bales.....lb.	.24	.25	.25	.22	.18½	.12
Mastic Gum, 120 lb cans....lb.	.65	.70	.70	.65	.70	.60
Matico Leaves, bales.....lb.	.30	.31	.32	.30	.45	.31
Mezereon Bark, bags.....lb.	.20	.25	.25	.20	.35	.20
Millet Seed, Yellow, bags...lb.	.03½	.04½	.04½	.03½	.04½	.03½
Montan Wax, Crude, bags..lb.	.06½	.07	.07	.06½	.07	.06½
Bleached, bags.....lb.	.25	.28	.28	.25	.28	.25
Moss, Iceland, bales.....lb.	.10	.12	.11	.10	.12	.07½
Irish, Bleached, bales....lb.	.14	.17	.18	.13	.18	.11
Mullein Flowers, tins.....lb.	1.35	1.40	2.00	1.35	2.25	2.00
Leaves, bales.....lb.	.07½	.08	.08	.07½	.08	.07½
Musk Root, Russian, bags...lb.	.09	.10	.12	.09	.25	.11½
Myrrh Gum, 200 lb, cases...lb.	.32	.35	.65	.32	1.10	.55
Nutgalls, Chinese, bags.....lb.	.22	.....	.22	.22	.22	.22
Aleppy, bags.....lb.	.21	.....	.21	.21	.25	.21
Powdered, bags.....lb.	.23	.....	.23	.23	.23	.23
Nutmegs, 110's cases.....lb.	.26	.27	.31½	.26	.38	.30
75's & 80's cases.....lb.	.36	.37	.42	.36	.50	.42
Grinding, bags.....lb	.24	.25	.25	.24	.29	.26½
NUX-VOMICA Buttons, bag ..... lb.	.05	.06	.06	.05	.05½	.04
Powdered, 200 lb bbls..lb.	.08½	.09	.09	.08	.08½	.08
Oak Bark, bags.....lb.	.05	.05½	.05½	.05	.06½	.05
Olibanum Gum, 280 lb cases Siftings.....lb.	.12½	.14	.15	.12½	.11½	.13
Tears, No. 1 Extra.....lb.	.29	.30	.29	.27	.30	.26
No. 2.....lb.	.18	.20	.23	.18	.20	.18
No. 3.....lb.	.14	.16	.18	.14	.17	.14
Opium Gum, USP, cases....lb.	12.00	13.00	13.00	12.00	13.00	12.00
Granular, cans.....lb.	13.00	14.00	14.00	13.00	14.00	13.00
Powdered, USP, cans.....lb.	13.00	14.00	14.00	13.00	14.00	13.00
Orange Flowers, cases.....lb.	.25	.30	.30	.25	.25	.25
Peel, Bitter, bags.....lb.	.11	.12	.12½	.10	.11	.10
Sweet bags,.....lb.	.14	.15	.16	.11	.08½	.08½
ORRIS ROOT, Flor. bid. bags ..... lb.	.29	.30	.32	.17	.14½	.10
Powdered, 200 lb bbls..lb.	.32	.34	.35	.21	.17	.13
Verona, bags.....lb.	.23	.24	.25	.16	.13	.09
Powdered, 200 lb bbls..lb.	.26	.27	.32	.20	.14	.11
Fingers, boxes.....lb.	1.15	1.20	1.20	.90	.90	.80
Ozokerite Wax, Brown, Hard lb.	.....	.....	.....	.....	.....	.....
Bags.....lb.	.24	.25	.25	.24	.25	.24
Green, Hard, bags.....lb.	.30	.31	.31	.30	.31	.30
Yellow, Refined, bags.....lb.	.37	.....	.37	.37	.37	.37

{ Monthly Review }

Tanganyika Beeswax

Comptroller of Customs has issued the following return of exports of beeswax from the various Customs points of the Tanganyika Territory for the nine-month period to September 30, 1929. For purpose of comparison, the figures for the similar period for the two previous years are also given:—

	1927		1928		1929	
	cwt.	£	cwt.	£	cwt.	£
Dar-es-Salaam	6,896	50,277	5,527	40,329	3,966	28,996
Mwanza	293	2,048	243	1,662	.....	2
Lindi	575	4,286	934	6,512	1,321	9,245
Tanga	13	98	57	403	12	71
Kilwa	10	65	125	820	63	418
Other stations	10	84	7	43	12	70
Total	7,797	56,858	6,893	49,769	5,374	38,802

The export figures show a decline, attributable to the unsatisfactory and abnormally low rainfall which prevailed during the earlier months of the year throughout the majority of districts of the Territory. Such weather conditions are conducive to considerable and extensive migration of bees from the temporarily drought-stricken areas and to a general weakening in the condition of bee colonies which remain. The present price of wax (approximately 43s. per frasila at Dar-es-Salaam) shows a downward tendency, but, from the point of view of the native, the commodity may still be considered as easily the most remunerative export product of the Territory.—"*Chemist and Druggist.*"

Senna, Pyrethrum Imports

Imports of the subject products and other crude drugs for the first ten months of 1928 contrasted with the same period during 1929 are shown in the following table and were valued at $8,720,000 and $8,017,000 respectively:

	Ten Months, 1928		*Ten Months, 1929*	
	Pounds	*Value*	*Pounds*	*Value*
Cinchona bark	1,231,000	$328,000	1,451,000	$397,000
Pyrethrum flowers	11,651,000	3,064,000	6,134,000	1,529,000
Licorice root	49,174,000	1,361,000	62,238,000	1,552,000
Licorice extract	1,028,000	200,000	956,000	168,000
Senna	2,463,000	161,000	1,534,000	105,000
All other	21,134,000	3,145,000	22,849,000	3,458,000

The quantity of licorice root and licorice extract remaining in bonded warehouse on September 31, 1929, was 67,358,000 and 194,000 pounds respectively.

Gum Aloes No Easier

Supplies of gum aloes remain very scarce with prices firm at high levels. The conditions in the primary market which caused the present high levels to be brought about still continue. The oil refining company that established a refining plant at this place is paying the men who used to produce gum aloes higher wages than they obtained from production of the gum. Consequently, those who do produce the gum must obtain wages higher than or at least equivalent to the wages paid in the refinery. The question of the women going to work producing the aloes is answered by the fact that they do not have to work at all if the men are in steady positions. It would appear, therefore, that gum aloes are to be firm and high in price for a long time to come.

	Current Market		1929 High	1929 Low	1928 High	1928 Low
Papain, Crude, 150 lb cases	lb.	3.10	3.15	3.50	2.95	4.90	3.45
Pure, Powdered, 10 lb bot.	lb.	3.25	3.30	3.55	3.10	4.35	3.50
Paprika, bags	lb.	.23½	.24	.33	.23½	.33	.23
Pareira Brava Root, bags	lb.	.13	.14	.14	.11	.12	.11
Passion Flower, bales	lb	.09	.10	.75	.09	.15	.06½
Patchouli Leaves, bales	lb.	.22	.23	.23	.22	.29	.22
Pennyroyal, Herb, 100 lb bags	lb.	.07	.....	.07	.07	.07	.07
Leaves, 100 lb bags	lb.	.14	.16	.16	.14	.16	.14
PEPPERMINT LEAVES, Imp bales	lb.	.65	.75	.75	.43	.50	.43
Domestic, bales	lb.	.45	.46	.46	.24	.40	.24
Pichi Leaves, bags	lb	.13	.14	.16	.13	.14	.13
Pimento Select, bags	lb.	.19½	.19½	.30½	.19½	.23	.16½
Pink Root, True, bags	lb.	.55	.57	.60	.55	.75	.58
Pleurisy Root, bags	lb.	.22	.23	.28	.21	.28	.22
Poke Berries, bags	lb.	.....	.18	.30	.18	.30	.20
Root, 200 lb bales	lb.	.08	.08½	.08½	.07½	.10	.07½
Pomegrant Bark of Root, bags	lb.	.30	.35	.35	.20	.44	.20
Bark of Fruit, bags	lb.	.25	.30	.30	.25	.30	.30
Bark of Tree, bags	lb.	.18	.22	.22	.15	.21	.15
POPPY FLOWERS, Red, bags	lb.	.55	.60	.60	.50	.65	.50
Heads, bags	lb.	.50	.....	.50	.50	.50	.08
Prickly Ash Bark	lb.	.14	.17	.17	.14	.17	.14
Southern bags	lb.	.13½	.14	.14	.13½	.16	.13½
Northern, bags	lb.	.15	.16	.18	.15	.25	.16
Berries, bags	lb.	.20	.21	.21	.19	.22	.17½
Prince's Pine, bales	lb.	.48	.50	.50	.15	.17	.14
Pulsatilla, Herb, bags	lb.	.12	.13	.14	.12	.14	.11
Pumpkin Seed, bags	lb.	.14	.15	.15	.14	.25	.14
Quassia Chips, bags	lb.	.06½	.....	.06½	.06½	.06½	.06½
Quebracho, bulk, 125 lb. bbl.	lb.	.30	.31	.31	.29	.36	.29
Root, bags	lb.	.....	.07	.07	.07	.08	.07
Quince Seed, bags	lb.	.80	.90	.80	.70	.80	.60
Cape, bags	lb	.95	1.10	1.25	.80	1.50	.95
Rape Seed, South American, bags	lb.	.05½	.06	.06	.05½	.06½	.04½
Dutch, bags	lb.	.07	.07½	.07½	.06	.07½	.05½
Japanese, small bags	lb.	.05½	.06½	.07	.05½	.07	.06½
Raspberries, Dried, bbls.	lb.	.50	.60	.60	.45	.85	.45
Red Saunders, bags	lb.	.08	.....	.08	.08	.08	.08
Rhatany Root, bags	lb.	.12	.13	.13	.11	.12	.11
Rhubarb Root, HD, cases	lb.	.27	.28	.41	.27	.45	.38
Powdered, bbls	lb	.33	.35	.46	.33	.53	.43
Rosemary Leaves, bales	lb.	.05	.05½	.06	.04½	.06	.04½
Flowers, cases, bales	lb.	.25	.30	.30	.25	.30	.25
Rose Petals, pale	lb.	.40	.41½	.42½	.40	.45	.38
Red	lb.	1.65	1.70	1.80	1.65	2.20	1.70
Rue, Herb, bales	lb.	.18	.20	.20	.18	.20	.18
Sabadilla Seed, bags	lb.	.28	.29	.34	.28	.35	.30
Powdered, bbls	lb.	.30	.31	.39	.30	.38	.32
SAFFRON FLOWERS, American, bales	lb.	.30	.35	.40	.30	.40	.29½
Valencia, 1 lb cans	lb.	10.50	11.50	12.00	10.50	16.00	11.25
Sage Dalmatian, bales	lb.	.05½	.06	.06	.05½	.07	.05½
Greek, bales	lb.	.05½	.06	.06	.05½	.06	.04½
Sandarac Gum, 300 lb bbls.	lb.	.70	.75	.75	.40	.43	.30
Sarsaparilla Root, Honduras, bales	lb.	.53	.54	.55	.53	.58	.52
Mexican, bales	lb.	.24	.26	.40	.24	.29	.20
Sassafras Bark, Ordinary, bales	lb.	.14	.16	.16	.14	.17	.13½
Select, bales	lb.	.22	.24	.28	.22	.27	.23
Savory Leaves, bale	lb.	.08½	.09	.09	.08½	.10	.07½
Saw Palmetto Berries, bags	lb.	.09½	.10½	.12	.09½	.20	.11
Scammony Resin, boxes	lb.	1.30	1.35	1.35	1.30	1.35	1.30
Root, bags	lb.	.08½	.....	.08½	.08½	.08½	.08½
Senega Root, bags	lb.	1.00	1.05	1.35	1.00	1.40	1.27
SENNA ALEX., 150 lb cases	lb.	.25	.30	.30	.25	.30	.25
Half leaf 150 lb cases	lb.	.12½	.14½	.15	.12½	.15	.13
Sifting, 400 lb bales	lb.	.11	.11½	.11½	.10½	.11	.10½
Tinnevelly, Bold, 350 lb bales	lb.	.16	.18	.18	.16	.20	.15
Medium Leaf	lb.	.11	.12	.12	.10	.13½	.09
Small Leaf	lb.	.07	.09	.10	.07	.10	.07
Pods, 350 lb	lb.	.08	.08½	.11½	.08	.13	.08½
Powdered, 200 lb	lb.	.....	.11	.11	.11	.10	.11
Serpentaria Root, bags	lb.	.65	.68	.72	.65	.77	.70
Shellac, T. N., bags	lb.	.57	.58	.58	.57	.58	.57
Simaruba Bark, bales	lb.	.20	.25	.40	.20	.38	.06
Skullcap Leaves, Eastern, bales	lb.	.....	.75	.75	.40	.40	.33
Western, bales	lb.	.34	.35	.35	.18	.26	.18
Skunk Cabbage, Striped, bales	lb.	.14	.16	.16	.14	.16	.14
Snake Root, Canada Natural, bags	lb.	.27	.28	.28	.24	.30	.24
Canada, Stripped, bags	lb.	.55	.....	.55	.55	.55	.55
Soap Bark	lb.	.14	.15	.15	.14	.15	.14
Cut, 125-175 lb bags	lb.	.11	.11½	.16	.11	.17	.16
Crushed, 200 lb bbls	lb.	.16	.....	.16	.16	.17	.16
Powdered, bbls	lb.	.17	.....	.17	.17	.18	.18
Spearmint Leaves, American, bales	lb.	.32	.37	.37	.25	.30	.25
Spermaceti, blocks, cakes, cases	lb.	.32	.35	.35	.32	.35	.32
Spikenard Root, bags	lb.	.18	.18½	.20	.18½	.25	.20
Squaw Vine, bales	lb.	.20	.21	.21	.18	.21	.21
Squills, White	lb.	.09	.10	.13	.09	.16	.08
Powdered, bulk	lb.	.23	.25	.25	.20	.30	.15
Stavesacre Seed, bags	lb.	.16	.17	.18	.16	.18	.15½
Stillingia Root, bags	lb.	.09	.10	.12	.09	.12	.10
Stone Root, bags	lb.	.08	.09	.09	.08	.09	.08
St. Ignatius Beans, bags	lb.	.14½	.15	.15	.14½	.15	.14½
St. John's Bread, bags	lb.	.....	.09	.09	.09	.14½	.09
STRAMONIUM LEAVES, bales	lb.	.16	.18	.20	.16	.20	.16
Seed, bags	lb.	.07½	.....	.07½	.07½	.07½	.07½

Drugs and Spices

{ Monthly Review }

Buchu Strong Abroad

Despite bullish reports from South Africa, which indicate that supplies of buchu leaves there are none too large considering the size of normal requirements, and that new crop quotations will most likely be higher than were quoted during the past year, the spot market is receiving poor support. Offerings are apparently plentiful on spot and consumers are not taking on supplies with any degree of enthusiasm.

It is more than likely, however, that the reason for the quietness of the domestic situation lies in the prospect of this item being placed on the Free List in the new tariff bill if such a bill is ever passed. Holders of bonded stocks are quite anxious to move their holdings into consumers hands as they feel that consumers would not really lose anything since they are buying for manufacture and not for resale. However, the consumers do not feel that way about it and are waiting to see if they can't save some money by waiting a little longer.

Ipecac Tone Easy

Ipecac remains in a quiet position with rather uncertain undertones that lean toward lower prices. Large lots of material both here and on the way are an unsettling factor in the minds of many sellers. However, it is a fact that these supplies are coming into strong hands and consumers may have to pay good value for the goods that they buy no matter how much material is available.

The visible supplies of ipecac are small at present and the large amounts available will readily pass into consumption over a comparatively short period of time. The only danger from the seller's point of view is that some of the holders might be pressed for cash in which event the situation might become demoralized. It does not appear, however, that the consumer can afford to wait too long for ipecac as the possibility of a few strong hands obtaining most of the floating supply might easily bring a rather sharp advance.

Quince Seed Very Scarce

Good quality quince seed is in very scant supply and prices are sharply higher with some sellers asking $1.50 per pound for the grade of goods that they supply. There is no immediate likelihood of relief from the situation which is caused solely by increasing consumption of this product in beauty preparations.

There is no doubt that importers will uncover new sources of supply or that their agents abroad will do so. But just how long it will take to organize the production and shipment of seed from other distant points of the world is a question. Suppliers are generally in the unfortunate position of not being able to supply all of their regular buyers and the present position is a very unsatisfactory one both from the position of the sellers as well as of the buyers.

A time such as this, when goods are very scarce and in active and urgent demand, is one when consumers should pay particular attention to their quality if they can afford to do so.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Strophanthus Seed, Kombe, bags....lb.	2.25	2.5	2.50	2.00	3.00	2.00
Styrax Liquid, Artificial....lb.	.26	.35	.35	.26	.35	.26
Genuine, USP....lb.	.40	.45	.45	.40	.45	.36
Sunflower Seed, bags Calif...lb.	.06	.07	.07	.06	.09	.06
South American, bags....lb.	.07	.07½	.07½	.07	.07½	.06
Tamarinds, bbls....lb.	.09½	.10	.10	.05	.06	.05
Kegs....keg	3.85	.....	3.75	3.85	3.85	3.85
Tansy, Herb, bales....lb.	.15	.16	.16	.11	.14	.11
Thus Gum, 280 lb bbls....lb.	.11¾	.20	.20	.11¾	.20	.11¾
THYME, Spanish, bales....lb.	.11	.11½	.16	.08½	.09	.08½
French, bales....lb.	.12½	.13	.12½	.08	.08½	.07
Tonga Root, bundles....lb.	.42	.....	.42	.42	.55	.42
Vine, bundles....lb.	.42	.....	.42	.42	.55	.42
Tonka Beans, Angostura Cases ....lb.	1.75	1.85	2.00	1.75	2.00	1.90
Para cases....lb.	.90	.....	.90	.90	.90	.90
Surinam cases....lb.	1.00	1.10	1.50	1.00	1.50	1.25
Tragacanth Gum, No 1, 100 lb cases....lb	1.45	1.50	1.60	1.50	1.60	1.55
No. 2....lb.	1.30	1.40	1.50	1.30	1.50	1.40
No. 3....lb.	1.10	1.20	1.30	1.10	1.30	1.25
Powdered, 50 lb boxes....lb.	.90	1.00	1.10	.90	1.10	.85
Turkish cases....lb.	.50	.90	.90	.45	.45	.45
Turmeric Root Madras, bags.lb.	.08½	.08¾	.09	.08½	.12	.06
Aleppy bags....lb.	.08½	.09	.10	.08½	.13	.06½
Powdered....lb.	.13	.15	.15	.13	.15	.10
China bags....lb.	.11	.12	.12	.11	.11	.09
Turpentine Venice True, 80 lb cases....lb.	.32	.40	.40	.32	.40	.3
Artificial, 80 lb cases....lb.	.17	.18	.18	.17	.17	.12
Uva Ursi Leaves, bales....lb.	.06	.06½	.06½	.06	.07	.07
Valerian Root, Belgium, bags ....lb.	.19	.21	.30	.19	.30	.16
VANILLA BEANS, Mexican, whole, cases....lb.	3.50	4.50	4.50	3.25	4.00	4 3.25
Cuts, cases....lb.	3.15	3.30	3.30	2.50	2.75	2.50
Bourbon, cases....lb.	1.85	2.50	2.65	1.75	2.75	2.00
South American, cases....lb.	.....	3.00	3.00	2.50	2.75	2.50
Tahiti, Green, label cases..lb.	1.75	2.00	2.50	1.75	2.30	2.25
Vetivert Root, 100 lb bags..lb.	.25	.....	.25	.25	.30	.25
Violet Flowers, bags....lb.	.75	.80	1.00	.68	.90	.63
Wahoo Bark of Root, bags..lb.	.52	.53	.56	.51	.62	.51
Bark of Tree, bags....lb.	.25	.26	.31	.25	.35	.25½
White Pine Bark, Roseed, bags ....lb.	.07½	.09½	.15	.07	.08	.07
White Poplar Bark, bags....lb.	.06	.07½	.07½	.05½	.07	.05½
Wild Cherry Bark, Thin, Green ....lb.	.14	.15	.20	.14	...	....
Rossed bales....lb.	.11	.12	.12	.11	.12	.11
Thick Rossed, bales....lb.	.09	.....	.09	.09	.09	.09
Thin Natural, bales....lb.	.08	.09	.09	.07½	.08	.07½
Thick Natural, bales...lb.	.06	.06½	.06½	.05	.06	.05
Wild Indigo Root, bags....lb.	.14	.15	.15	.13	.14	.13
Willow Bark, bags....lb.	.05	.05½	.05½	.05	.06	.05
White, bags....lb.	.15	.....	.15	.15	.05	.15
Witch Hazel Bark, bags....lb.	.07	.08	.08	.05½	.08	.06½
Leaves, bales....lb.	.07	.08	.08	.06½	.....	.....
Wormseed, American, bags..lb.	.10	.11	.13	.10	.20	.15
Levant, bags....lb.	3.65	3.80	4.15	3.65	5.25	4.25
Wormwood, Herb, Imp., bales ....lb.	.08	.08½	.10½	.08	.10½	.10
Dock Root, bags....lb.	.13	.14	.14	.10	.11	.10
Yerba Mate, bags....lb.	.18	.20	.20	.18	.20	.18
Santa, bags....lb.	.09½	.11	.11½	.09½	.11	.90½
Zedoary Root, bags....lb.	.07	.08	.08	.06½	.07	.06½

Miscellaneous

Castor Oil, odorless, bbls....lb.	.....	.14½	.....	.....	.....	.....
Chalk drop, 175 lb. bbls....lb.	.....	.03½	.03½	.03½	.03½	.03½
Precip. light, 250 lb. cask..lb.	.....	.04½	.04½	.04½	.04½	.04½
Heavy 540 lb. casks....lb.	.....	.02½	.03½	.02½	.03½	.02½
Bulk....ton	.....	5.00	5.00	5.00	5.00	5.00
English 7 lb. bags....lb.	.....	.08½	.08½	.08½	.08½	.08½
Cocoa Butter, 12 lb. box....lb.	.42	.45	.45	.42	.50	.40
Cod Liver Oil Nor. 30 gal. bbls ....bbls.	29.00	30.00	36.00	22.00	48.00	38.00
Newfoundland....bbl.	.....	30.00	46.00	30.00	46.00	46.00
Collodion U. S. P. 30 lb. dr...lb.	.....	.23	.23	.23	.23	.23
Corn Syrup 42° 50 gal. bbl. ....100 lb.	3.9½	4.16	4.16	3.91	4.51	3.31
Gelatin, USP, Silver 100 lb. cases....lb.	.55	.60	.60	.55	.60	.55
Pure Food, 50 lb. bbl....lb.	.53	.55	.55	.55	.53	.53
Glucose, (grape sugar) dry 70° bags c-l NY....100 lb.	3.14	3.24	3.24	3.14	3.24	3.14
Haarlem Oil, bot 6 gross cases ....gross	.....	3.75	3.25	3.25	3.25	3.25
Imported, 5 gr. cs.....gross	.....	3.50	3.50	3.50	3.50	3.50
Mineral Oil White, 50 gal. bbls. 80-85 vis....gal.	.50	.55	.67	.50	.67	.60
85-90 vis....gal.	.65	.70	.70	.65	.70	.65
125-130 vis....gal.	.75	.85	.92	.65	.92	.70
290 vis....gal.	.90	1.10	1.10	.90	1.10	1.00
Russian 110-115 vis.....gal.	.70	.80	.80	.70	.75	.70
145-155 vis....gal.	.74	.84	.89	.67	.80	.67
320-330 vis....gal.	.82	.92	.97	.75	.95	.80
Olive Oil, Edible bbls.....gal.	2.00	2.40				
Petrolatum, Lily White, USP, 400 lb. bbl ....lb.	.08	.09	.09	.08	.10	.09
Snow White USP, 400 lb. bbls....lb.	.09¾	.10	.10	.09¾	.13½	11¾
Soap Castile, 50 lb. box.....lb.	.....	.25	.25	.25	.25	.25
USP, powd, 250 lb. bbl....lb.	.28	.30	.30	.28	.30	.28
USP, green, 450 lb. bbl....lb.	.07½	.07½	.07½	.07½	.07½	.07½

COD LIVER OIL

GOLD MEDAL BRAND

Famous as the Finest Non-Freezing Medicinal Lofoten Cod Liver Oil obtainable. Highest vitamin potency. Manufactured by Oluf Holm, Ltd., Aalesund, Norway.

LANOLINE, U. S. P.

CREAM OF TARTAR, U. S. P. **TARTARIC ACID, U. S. P.**

E. M. JAVITZ & SON, Inc., ONE HUDSON ST., NEW YORK, N. Y.

BORAX and

BORIC ACID

Guaranteed 99½ to 100% Pure

Crystal - Granulated - Powdered

REFINED and U. S. P.

The Purity of
20 Mule Team Borax
Products is Never Questioned

PACIFIC COAST BORAX CO.

51 Madison Ave., New York

Chicago Los Angeles

CRUDE DRUGS

FOREIGN & DOMESTIC

WHOLE & MILLED

FROM A POUND TO A CARLOAD

Sales offices in all principal cities

Connections in all foreign countries

Collection depot at Asheville, N. C. for Domestic Botanicals

FACTORIES AT WEEHAWKEN & ASHEVILLE

The largest, most complete and fullest assorted stocks in America

S. B. PENICK & COMPANY

115-117 Fulton Street
New York, N. Y.

WMW CHEMICALS

Tribasic Calcium Phosphate

TECHNICAL --- PURE

"Modern manufacturing methods along with the very latest developments in equipment, enable us to manufacture a TRI CALCIUM PHOSPHATE especially adapted for pharmaceutical work."

"Very special attention has been given to the purity, uniformity, fineness and color."

WILCKES-MARTIN-WILCKES CO.

Chemical Works: Camden, N. J. Main Office: 135 William St., N. Y. C.

Sales Representatives: Boston—Chicago—Cleveland—Camden, N. J.—Detroit—San Francisco—New Orleans—St. Louis

2.

FABRITIUS, OSLO

National Committee for Promoting the Consumption of Norwegian Cod Liver Oil, Bergen, Norway

COD LIVER OIL ABOUNDS IN NATURAL VITAMINS.

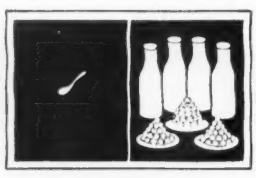
Cod Liver Oil stimulates growth, prevents or cures rickets, gives increased protection against epidemics and wasting diseases such as consumption. Cod Liver Oil maintains strength, assists recovery after illness: builds up the system and restores health, vitality and strength.

Every Doctor and every Nurse knows this. But every day almost, some new and important property of cod liver oil is discovered. Thus in its Special Report No. 134, the British Medical Research Council states:

"On the Archangel front during the war, night-blindness amongst the troops was a common occurrence. The condition yielded to treatment with cod-liver oil, which contains vitamin A."

In your practice perhaps you have discovered some other way in which cod liver oil is useful. If so, please write and tell us about it so that we can place your knowledge at the disposal of the Medical Profession.

A TEASPOONFUL OF NORWEGIAN COD LIVER OIL CONTAINS MORE VITAMINS THAN



ALL THE BUTTER AND MILK ANY INDIVIDUAL CAN EAT AND DRINK IN A DAY

NORWEGIAN COD LIVER OIL

Foreign Abstracts

(Continued from page 44)

of the product. Thus for example, anthrasol soaps are used for growing hair and preventing dandruff. On the other hand when the soaps are prepared in the cold, then the action is entirely different, in fact just the opposite. For soaps, that are manufactured by the cold process, always contain free alkali, and this alkali attacks the tender hair on the head and results in a scaly or dandruffy formation. A good grade of such anti-dandruff soap is manufactured by milling the soap and super-fatting with the addition of lanolin. L. von Palfy, Vegyi Ipar, through Der Seifenseider Zeitung 1929, page 420.

Study on the Purification of Pepsin

The object of the investigation was the applications of the physical-chemical properties and characteristics of pepsin in its purification. The general method used is described briefly below. One gram of pepsin is made to dissolve in 6 cc. of distilled water at a temperature of 18° C. The distilled water contains as well 1.20 cc. of hydrochloric acid (normal solution). Sufficient distilled water is then to make up a volume of 10 cc. The pH coefficient of the solution is 2.5. Then 30 cc. of pure, anhydrous rectified acetone are added. The mixture is centrifuged, the supernatant liquid is decanted and the pepsin, which has been purified in this manner is dried under a vacuum. Its titer has been increased by at least three quarters of its original value. The yield by weight is about 55%. M. J. Pie, Revue Generale des Colloides, May 1929.

Pharmacodynamic Properties of Adonis Vernalis

Tests were carried out on the active principles which are contained in Adonis vernalis. This plant contains two glucosides. One of these is very soluble in water, insoluble in chloroform and is called adonidoside. The other is almost insoluble in water, but soluble in chloroform. It is called adonivernoside. The adonidines which are actually used for pharmaceutical purposes are mixtures in equal proportions of the two glucosides.

Particular attention was paid to the toxicity of Adonis vernalis and to its action on the circulation and the urinary secretion. The toxic dose varies from 0.25 to 0.50 milligram per kilogram weight of dog. When the drug is administered in therapeutic doses, slowing down of the heart and a general improvement of the quality of the pulse are noted. When the drug is administered in moderate doses, the heart is often accelerated instead of slowed down. The diuretic action of Adonis vernalis is almost nil. Jung and Fontenailles, Comptes rendues de la Societe de Biologie, 1929.

Reaction of Barbaloin and Aloes

Two drops of assymmetrical-phenylmethylhydrazine are added to a solution of 0.1 gram of aloes in 10 grams of ethyl alcohol and the mixture is observed periodically for 24 hours and then for 48 hours. Color reactions given by different brands of aloes are as follows:—Barbadoes: first red, then greenish, blue green, green; Curacao: dark, greenish, blue green, green; Zanzibar: similar to Curacao; Natal: darkens very slowly; Cape: darker, then tinged with green, green. Phenylhydrazine gives hone of the above reactions. Using a concentrated solution of Barbaloin the reaction gives a greenish blue powder sintering at a temperature of 200° C. and decomposing at a temperature of 240° C. A faint green color is still noticeable with 5 grams of a 1:20,000 barbaloin solution. L. Rosenthaler, Pharm. Zentr., 1929, volume 70, pages 573ff.

COD LIVER OIL

A-A BRAND

Finest Medicinal Quality

The recognized standard, known for its high vitamin contents. Guaranteed the finest Norwegian non-freezing medicinal cod liver oil.

POULTRY GRADES

For animal and poultry feeding

Highest vitamin potency

Packed in barrels or drums.

Write us for quotations

FOR SPOT DELIVERY or direct shipment from Norway.

BRÖDR. AARSAETHER A/S
AALESUND
NORWAY

P. R. DREYER Inc.

Sole Representative in the United States

26 CLIFF STREET,
NEW YORK, N. Y.

CHICAGO BALTIMORE PHILADELPHIA ST. LOUIS KANSAS CITY BOSTON

The Drug Market-Place

Wants and Offers

Business Opportunities

IMPORTERS of DRUGS and PHARMACEUTICAL PRODUCTS want offers. Take charge of Patents, Trade-marks, and Licenses to sell Pharmaceutical Specialties. Isaias G. Lopez & Co., Box 899, Bogota, Colombia, S. A.

INDIAN CRUDE DRUGS & HERBS

Old established and thoroughly experienced importers desire to extend their sales to U. S. A. Pure Musk (Grains and in Pods), Kamala Powder U. S. P., Soap Nuts, Ephedræ Grass, Costus Root, Beeswax, Aconite, Cardamons, Quince Seed, etc. are specialties. Will brokers and interested importers kindly write to:

Surn Singh Ram Singh
Estd. 1860 A. D.
Amritsar, India
Cable Address—"Musk"

FOR SALE: Leading drug store in town of 15,000, northern Ohio; established 1860, entirely remodelled and modernized a few years ago. Annual sales in excess of $75,000.00. Rexall agency, own our building, best corner, and will sell real estate or arrange long term lease. Apply Box 785. DRUG MARKETS.

Situations Wanted

PRODUCTION MANAGER in toilet goods and cosmetics laboratory would like to make change to larger company. Eight years' experience in developing new machinery, scheduling production, and directing production of prominent manufacturers. Box 790, DRUG MARKETS.

EXPERT in the manufacturing of flavoring extracts, syrups, supplies and specialties for the confectionery, bakery, bottle and soda fountain trades. Can match new products or the well known brands in the market and beat competition. Can help create sales and improve business. Services were of value to other well known firms. Box 784, DRUG MARKETS.

REGISTER HERE

A good way to find the kind of a job you want or have been training for; an equally good way for any manufacturer in the drug trade, whether medicinal, toilet preparation or raw materials, to find a salesman, chemist, plant man, etc., is to register with DRUG MARKETS. No charge is made for this service. You do not have to be an advertiser in "The Drug Market Place" although this would, of course, materially increase your chances of finding what you want.

To register, just address "Registration, DRUG MARKETS." Give full details. Where desired, your name will be kept in full confidence.

Rates—All classifications $1.00 an issue for 20 words or less; additional words 5c each.

Payment must accompany order, add 10 cents if replies are to come to a box number and be forwarded.

DRUG MARKETS
25 Spruce St. New York

Help Wanted

WANTED—Specialty Drug Salesman acquainted with Drug and Department Store trade, for the different States. Splendid opportunity. Give references with letter. Box 789, DRUG MARKETS.

Plant Equipment
Reliable Used Machinery

HEADQUARTERS
GOOD USED MACHINERY

SPECIALS

NEW Glass Lined Storage and Mixing Tanks, 10, 30, 50 and 100 gals. Direct from manufacturer. Send for circular.
52—Dopp Steam Jack. Kettles, 50 to 200 gals.
3—Pfaudler Glass Lined Storage Tanks, 200 and 300 gals.
1—Stokes O single punch Tablet Machine.
1—Stokes N single punch Tablet Machine.
1—Colton Air Type Tube Filler.
11—Aluminum Steam Jack. Kettles, 100 gals.

Miscellaneous: Filter Presses from 18"x 18" to 36"x36"; Day Sifters and Mixers; Colton and Stokes Tube Fillers, Tube Closers and Tube Clippers; Copper Jacketed Kettles; Tanks; Extractors; Pulverizers; Pumps; Dryers; Drug Mills; Ointment Mills; Powder Fillers; Oscillators; Granulators; etc. Send us your inquiries.

CONSOLIDATED PRODUCTS CO., Inc.
18-21 Park Row, N. Y. C. Barclay 0600
Send us a list of your surplus equipment.

FOR SALE—Filter Presses; Powder Mixers, capacity 50 to 3,000 lbs.; Tube Fillers, Closers and Clippers; Copper and Aluminum Kettles; Tanks; Portable Mixers; Ointment Mills; Powder Fillers; Glass Enamel Tanks; etc. Send for complete lists Stein-Brill Corp., 25 Church St., New York, N. Y. Phone, Barclay 4850.

Professional Service

Consulting Chemists

FOOD RESEARCH LABORATORIES, Inc.
Philip B. Hawk, President
Investigations in
Biochemistry and Nutrition
Standardization of Pharmaceutical and Vitamin Products
Telephone Ashland 5671 — 114 East 32nd St. New York
Member Association Consulting Chemists and Chemical Engineers

LA WALL & HARRISSON
Charles H. LaWall — Jos. W. E. Harrisson
Analytical and Consulting Chemists
Pharmaceutical and Chemical Research
Process and Formula Development
Food, Drug and Water Analyses
Legal Testimony
636 Race Street — Philadelphia, Pa.

FOSTER D. SNELL
Consulting Chemist
Commercial Research and Technical Advice on Specialties. Process and Formula Development. Legal Testimony.
130 Clinton Street — Brooklyn, N. Y.
Laboratory, 35 Myrtle Avenue

Custom House Service

LO CURTO & FUNK
Custom House Brokers and Foreign Freight Forwarders
One Broadway — New York, N. Y.
Telephones: Bowling Green 10268, 9392, 10214

Miscellaneous

CAPSULES: Headquarters for Filled Capsules. Stock or private formulas. Bulk or retail package. H. Planten & Son, Inc. (Founded, 1836), 95 Henry Street, Brooklyn, New York.

WANTED

A Colton Automatic Capsule Filling Machine, in good condition. Address Box 788, DRUG MARKETS.

FOR RENT
IN ATLANTIC CITY, N. J.

UPPER FLOOR of W. W. Wrigley Building, Vermont and Drexel Aves., 100x100 feet—10,000 square feet of floor space. Private entrance.

Beautiful modern building, dry, well heated, steam with vacuum return system, equipped throughout with sprinkler system, private offices, male and female lavatories, daylight from four sides. Perfect for light manufacturing or as warehouse. Entire lower floor is occupied by owner, Wrigley Pharmaceutical Co., manufacturers of famous SPEARMINT ANTI-FERMENTATIVE TOOTH PASTE, distributed throughout the United States and Canada.

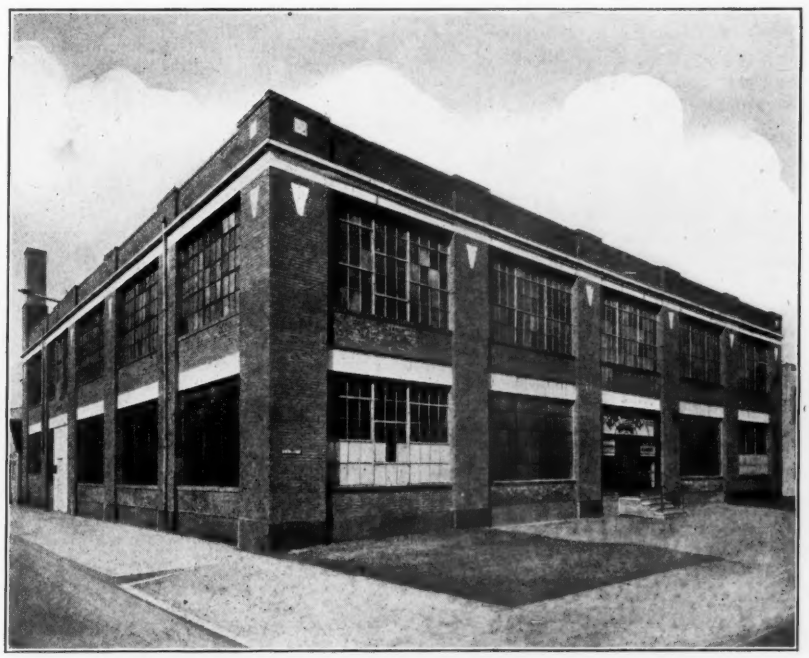
Lowest square foot rate for this type of building now offered in Atlantic City.

ATLANTIC CITY IS IDEALLY SITUATED FOR THE MANUFACTURE OF TOILET ARTICLES

REAL ESTATE AGENT

RUFFU CORPORATION

2205 ATLANTIC AVENUE ATLANTIC CITY, N. J.



W. W. WRIGLEY BUILDING

What Viscosity Means!

Naturally, you know,

But what does it mean in connection with **Petrolatum Liquidum U. S. P., a Medicinal White Mineral Oil ?**

Medicinal White Mineral Oils were originally produced only from Russian Crude Oil. As usual with oils made of the same crude, the higher the Viscosity, then the higher will be the Specific Gravity. Therefore, formerly it was sufficient to classify and sell Medicinal White Mineral Oils on the basis of the Specific Gravity; and of two such oils, the one with the highest Specific Gravity was the better, provided both oils were equally pure. This method, however, does not hold good when comparing oils of different origin, as then the Specific Gravity figure, as a valuation of the oil as a lubricant for either internal or external purposes, ceases to apply; at least such comparisons are likely to lead to serious mistakes.

ALBINOL, Genuine Russian White Medicinal Oil (Petrolatum Liquidum U. S. P.) refined from Russian Oil has a Saybolt Viscosity of about 325″ at 100°F and a Specific Gravity of about .885. White Medicinal Oils of different origin have, for example, a Specific Gravity of .890 and higher, but a Saybolt Viscosity of only 300″ or less at 100°F. It therefore results that if a different base crude oil is used for the manufacture of Petrolatum Liquidum U. S. P., it is incorrect to judge the value of an oil by the Specific Gravity. It is the **Viscosity** which determines the value of a lubricant; therefore the basis **must** be the Viscosity, and the oil with the highest Viscosity is the most valuable.

Schliemann Companies, Inc.

53 Park Place, New York, N. Y.

REFINERY IN HAMBURG, GERMANY

Index to Advertisers

Abbott Laboratories, No. Chicago, Ill. 67
Alsop Engineering Co., New York ..... Cover 2
American Can Co., New York 20
American Chemical Products Co., Rochester, N. Y. 68
American Commercial Alcohol Corp., New York 6
American Potash & Chemical Corp., New York 70
American Solvents & Chemical Corp., New York Insert facing 40
American Telephone & Telegraph Co. 46
Anchor Cap & Closure Corp., Long Island City, N. Y. 8
Armstrong Cork Co., Lancaster, Pa. 9
Baird & McGuire, Holbrook, Mass. 70
Baker & Bro., H. J., New York 91
Baker Chemical Co., J. T., Phillipsburg, N. J. 66
Bond Manufacturing Corp., Wilmington, Del. 68
California Fruit Growers Exchange, Ontario, Cal. 89
Carr-Lowrey Glass Co., Baltimore, Md. ..... Insert facing 48
Coignet Gelatines, New York 91
Colton Co. Arthur, Detroit, Mich. 71
Consolidated Products Co., New York 102
Container Corp. of America, Chicago, Ill. 5
Cooper & Co., Chas., New York 64, 70
Crown Cork & Seal Co., Baltimore, Md. 11
Dodge & Olcott Co., New York 52
Dow Chemical Co., Midland, Mich. 1
Dreyer Inc., P. R., New York 62, 101
Euro American Corp., New York 85
French, Inc., Benjamin, New York 87
Fritzsche Brothers, Inc., New York 60
General Plastics, Inc., No. Tonawanda, N. Y. 3
Givaudan-Delawanna, Inc., New York 58
Greeff & Co., Inc., R. W., New York 95
Gutmann, Ferdinand & Co., Brooklyn, N. Y. 72
Heyden Chemical Corp., New York 74
Hinde & Dauch Paper Co., Sandusky, Ohio 13
Hoffmann-La Roche, Inc., Nutley, N. J. 77
Hopkins & Co., J. L., New York 95
Horix Mfg. Co., Pittsburgh, Pa. 72
Industrial Chemical Sales Co., Inc., New York 63
Javitz & Son, E. M. Inc., New York 99
Kelsey-Risden Co., Inc., New York 67
Kiefer Machine Co., Karl, Cincinnati 73
Kimberly-Clark Corp., Neenah, Wisc. 7
Leonhard Wax Co., Inc., Theodor, Paterson, N. J. 64
Magnus, Mabee & Reynard, Inc., N. Y. 65
Mallinckrodt Chemical Works, St. Louis 16
Maryland Glass Corp., Baltimore, Md. ..... Insert facing 32
McIlvaine Brothers, Inc., Philadelphia 93
Merck & Co., Inc., Rahway, N. J. 83
Mixing Equipment Co., Inc., Rochester, N. Y. 73
Monsanto Chemical Works, St. Louis ..... Insert facing 9
New England Collapsible Tube Co., New York 15
Newport Chemical Works, Inc., New York 83, 87
N. Y. Quinine & Chemical Works, Brooklyn, N. Y. 14
Norwegian Cod Liver Oil Ass'n, Norway 100
Owens-Illinois Glass Co., Toledo ..... Cover 4
Pacific Coast Borax Co., New York 99
Package Machinery Co., Springfield, Mass. 71
Parsons, M. W., New York 72
Penick & Co., S. B., New York 99
Pfaltz & Bauer, Inc., New York 81
Pfizer & Co., Chas. Inc., New York ..... Insert facing 8
Phoenix Hermetic Co., Chicago, Ill. 12
Plaimar, Ltd., Perth, Western Australia 89
Powell & Co., Inc., John, New York 65
Rossville Commercial Alcohol Corp., Lawrenceburg, Ind. ..Cover 3
Schering Corp., New York 66
Schliemann Companies, Inc., New York 104
Spring Stopper Co., New York ..... Insert facing 56
Stokes Machine Co., F. J., Philadelphia 69
Sturge, John & E. Birmingham, England ..... Insert facing 57
Sun Tube Corp., Hillside, N. J. ..... Cover 1
Todd Co., A. M., Kalamazoo, Mich. 91
Ungerer & Co., New York 54
U. S. Industrial Alcohol Co., N. Y. 79
van Ameringen-Haebler, Inc., New York ..Insert bet. 48 & 49
Wangler-Budd Co., Inc., New York 91
White Metal Mfg. Co., Hoboken, N. J. 10
Wilckes-Martin-Wilckes Co., New York 99
Will & Baumer Candle Co., Inc., Syracuse, N. Y. 64
Wilson Laboratories, Chicago, Ill. 70
Wirz, Inc., A. H. Chester, Pa. ..... Insert facing 49